

Exhibit A

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Origin priority claimed <input type="checkbox"/> yes <input checked="" type="checkbox"/> no USC 119 conditions met <input type="checkbox"/> yes <input checked="" type="checkbox"/> no AS FILED STATE OR COUNTRY CA SHEETS DRWG. 9 TOTAL CLAIMS 35 INDEP. CLAIMS 7 FILING FEE RECEIVED \$ 934.00 ATTORNEY'S DOCKET NO. 332-2130 Certified and Acknowledged <i>OK</i> CURTIS, MORRIS & SAFFORD 530 FIFTH AVENUE NEW YORK, NY 10036									
SYSTEM AND METHOD FOR DISTRIBUTING LOTTERY TICKETS									
U.S. DEPT. of COMM-Pat. & TM Office - PTO-436L (Rev. 10-78)									

OF APPLICATION
SEPARATELY

E OF ALLOWANCE MAILED		PREPARED FOR ISSUE 7/15/90		CLAIMS ALLOWED	
7-19-90		Assistant Examiner <i>Joseph Ruggiero</i>		Total Claims 35	Print Claim 1
ISSUE FEE		JOSEPH RUGGIERO PRIMARY EXAMINER ART UNIT 236 Primary Examiner		DRAWING	
Date Due 7/16/90	Date Paid 7/22/90			Sheets Drwg. 8	Figs. Drwg. 16
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PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
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Date: December 3, 1987

Re: 332-2130

TO THE COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

Sir:

With reference to the filing in the United States Patent and Trademark Office of an application for patent in the name(s) of: Robert L. Burr et al.

entitled: SYSTEM AND METHOD FOR DISTRIBUTING LOTTERY TICKETS

- ☐ This is an application of a small entity under 37CFR 1.9(f) and the amounts shown in parentheses below have been employed in calculating the fee. ☐ Small Entity Verified
- Statement(s) is (are) enclosed.

The following are enclosed:

- ☒ Specification
- ☒ 49 Claims(s) (including 7 independent claims)

☐ This application contains a multiple dependent claim.

- ☐
- Oath or Declaration and Power of Attorney

- ☒
- 9 (informal) Sheet(s) of Drawings

- ☒
- Our check for \$ 824.00, calculated as follows:

Basic Fee \$340.00(170.00) \$340.00

Total Number of Claims in excess of 20 at \$12.00 (6.00) each \$348.00

Number of Independent Claims in excess of 3 at \$34.00 (17.00) each \$136.00

Multiple Dependent Claim Fee at \$110.00 (\$5.00)

Total Filing Fee \$824.00

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- ☐
- Order Form for Recording Assignment

- ☐
- Certified copy of each of the following application(s) to substantiate the claim(s) for priority made in the Declaration:

Application No. filed in

Please charge any additional fees required for the filing of this application or credit any overpayment to Deposit Account No. 03-3925. A duplicate copy of this letter is enclosed.

Respectfully submitted,

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
APPLICATION FOR LETTERS PATENT

Title : SYSTEM AND METHOD FOR DISTRIBUTING
LOTTERY TICKETS

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45 Pages
49 Claims
9 Sheets of Drawings

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~~SYSTEM AND METHOD FOR DISTRIBUTING LOTTERY TICKETS~~

FIELD OF THE INVENTION

The present invention relates generally to ticket dispensing systems and more particularly relates to a system and method for distributing lottery tickets.

BACKGROUND OF THE INVENTION

State-sponsored lotteries are now a popular and accepted method of generating revenue in place of taxes. One popular form of the lotteries is the Lotto-type game where the player selects his own numbers, for example by filling out a computer card, and receives a lottery ticket which has been printed with his selected numbers. A drawing is then held at a later time to determine the winning numbers. Another popular form of lottery uses the so-called instant lottery tickets, on which winning or non-winning combinations are preprinted before distribution so that no later drawing is necessary and the player knows immediately after purchasing his ticket whether or not he has won.

The usual system for distributing Lotto-type lottery tickets includes a large number of ticket-dispensing remote units located at drug stores, supermarkets, liquor stores and the like. Each unit is independent and is operated by the store owner, who customarily receives a portion of the ticket price for each lottery ticket sold. The usual system for distributing instant lottery tickets, on the other hand, is entirely clerical, with the tickets being stored in a drawer and counted out by hand. The store owner typically is responsible for keeping track of the

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number of tickets sold, making redemption payments up to a certain amount for certain types of winning tickets and for providing such sales and pay-out information to the state. The state in turn calculates the money due from or owing to the store owner and sends an invoice and/or money payment. Given the very large number of stores which now sell lottery tickets, it would be highly desirable to simplify the accounting procedure so as to avoid any mistakes or improprieties by the store owner and to assure proper and prompt payment of all monies due. It would also be valuable to the state to know on a daily basis whether each store owner has a sufficient supply of tickets, as well as how much money is due that day.

Another consideration in lottery ticket distribution is the speed with which the lottery tickets may be sold. It is a frequent occurrence in large cities for long lines of ticket buyers to form at lunch time or after work in order to buy tickets. As mentioned above, the ticket seller has conventionally had to count out and hand instant lottery tickets himself to the customers. It would be highly advantageous and to have a ticket-dispensing unit which would itself dispense instant or other lottery tickets at an outlet where they are easily accessible to the customer.

Still another consideration in a lottery ticket-dispensing unit is security. Particularly when instant tickets are being dispensed, the unsold tickets should be locked up in the unit or drawer to prevent their theft. Since the unit or drawer must be periodically opened to allow a new supply of lottery tickets to be inserted, it is

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desirable
 a ~~important~~ to keep track of when and how often the tickets
 a are replaced. In addition, it may be necessary, for security
 a reasons, to keep track of which lottery tickets were sold
 from which location, both to detect and prevent forgeries
 and unauthorized sales and to assist the customers in making
 complaints, suggestions or the like.

a Particularly when a large number of tickets ~~are~~^{is}
 stored within the dispensing unit, it is an advantageous
 a feature ^{of} in the present invention to ~~provide the tickets in a~~^{dispense tickets}
 a ~~fan-fold stream~~^{stored in form} so that they may be rapidly fed out from
 storage without the risk of ~~double feeding~~^{unintentionally dispensing too many tickets} when
 separated tickets are stored. There is as yet no
 standardization in the size of the tickets, which come in
 various widths and lengths. ^{a1 Therefore, it} ~~it~~ would be highly advantageous
 to provide ~~a dispensing mechanism within the dispensing unit~~^{ticket}
 a to separate the tickets from ~~the stream~~^{one another} while ensuring that
 the separation of the tickets occurs only at the joiner
 line therebetween, ^{despite the variation in the} ~~since again for security reasons~~
 a ~~generally only complete tickets are redeemable.~~^{a2}

OBJECTS AND SUMMARY OF THE INVENTION

Accordingly, it is an object of the present invention to provide a system and method for distributing lottery tickets which avoid the above-described difficulties of the prior art.

It is another object of the present invention to provide a system and method for distributing lottery tickets in which sales data for a number of different ticket-

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dispensing units is automatically transmitted to a central data processor for system-wide accounting evaluation.

It is yet another object of the present invention to provide a system and method for distributing lottery tickets in which accounting information may be automatically calculated at each appropriate ticket-dispensing unit for print-out thereat.

It is still another object of the present invention to provide a method and system for distributing lottery tickets in which communication between the central data processor and the dispensing units is periodically established so as to transfer the sales data during limited intervals of time, thereby avoiding the need for a permanent communication link.

It is still another object of the present invention to provide a method and system for dispensing lottery tickets in which an accurate and current account of the ticket supply and monies due is available both to a controlling authority and to the sales agents.

It is a further object of the present invention to provide an apparatus for dispensing lottery tickets including a control panel mounted at the front and accessible to the sales agent and a dispensing outlet at the back and accessible to the customer so as to speed up the dispensing of tickets.

It is still a further object of the present invention to provide a method and apparatus for dispensing tickets in which the tickets are stored in a fan-fold stream and are separable from each other along lines of weakness.

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It is yet a further object of the present invention to provide a method and apparatus for dispensing tickets in which the tickets are separated by bursting the lines of weakness to provide an automatic mechanical alignment of the tickets.

It is yet a further object of the present invention to provide a method and apparatus for dispensing lottery tickets in which each access to a ticket storage area is detected and recorded.

In accordance with an aspect of the present invention, a system for distributing lottery tickets comprises central processing means, a plurality of remote units for dispensing lottery tickets, each remote unit including memory means for storing sales data indicating at least a number of lottery tickets dispensed by the respective remote unit, and communication means actuatable for selectively placing the data processing means in communication with at least one remote unit, the remote unit transferring the sales data to the data processing means and the data processing means transferring at least message data to the remote unit through the communication means. Advantageously, the communication means includes dial-up modem means which may be actuated at pre-selected intervals, for example, once a day, to transmit data between the data processing means and one remote unit.

In accordance with this aspect of the present invention, a method of distributing lottery tickets comprises the steps of dispensing lottery tickets at a plurality of remote locations, memorizing at each remote

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location sales data indicating at least a number of lottery tickets dispensed at the respective location, transferring the memorized sales data from at least one remote location to a central data processing location over an electronic communication system and transferring message data from the central data processing location to the remote location over the system.

In accordance with a further aspect of the present invention, apparatus for dispensing lottery tickets comprises a box-like module having opposed front and back surfaces, ticket storage means within the module for storing a plurality of lottery tickets, control panel means mounted at the front surface of the module and being actuatable for initiating dispensing of the lottery ticket, a dispensing outlet manually accessible at the back surface for receiving a dispensed lottery ticket from the ticket storage means and ticket dispensing means responsive to the control panel means for dispensing a lottery ticket from the ticket storage means to the dispensing outlet, whereby the dispensed lottery ticket may be manually removed from the apparatus.

In accordance with yet another aspect of the present invention, apparatus for dispensing tickets comprises ticket storage means for storing a plurality of tickets connected in a fan-fold stream headed by a leading ticket, the tickets being separable from each other along lines of weakness, transport means for feeding the stream of tickets from the ticket storage means along a predetermined dispensing path, separation means for separating the leading

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ticket from the stream along a leading line of weakness between the leading ticket and a next following ticket and manually accessible outlet means for receiving the separated ticket. Advantageously, the separation means includes a dull edge bursting blade moveably mounted adjacent a predetermined bursting position along the path, holding means for holding the stream of tickets against substantial deflection from the path at the bursting position, and bursting blade drive means for bringing the bursting blade into bursting contact with the stream of tickets at the bursting position to burst the leading ticket from the next following ticket. In a further development of this aspect of the present invention, the separation means includes feed alignment means including sensor means for detecting a present position of the leading ticket relative to the bursting position, means for determining a transport direction and a displacement distance necessary to bring the leading line of weakness to the bursting position and transport control means for generating a transport control signal indicative of the transport direction and displacement distance, the transport means being responsive to the transport control signal for transporting the ticket stream in transport direction by the displacement distance.

These and other objects, features and advantages of the present invention will become clear from the following detailed description of a preferred embodiment of the present invention taken in connection with the accompanying drawings, throughout which like reference numerals identify like elements and parts.

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BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a schematic diagram illustrating a preferred embodiment of the system for distributing lottery tickets according to the present invention;

Fig. 2A is an exemplary daily sales report produced by the present invention;

Fig. 2B is an exemplary weekly sales report produced by the system according to the present invention;

Fig. 2C is an exemplary weekly invoice produced by the system according to the present invention;

Fig. 2D is an exemplary current sales report produced by the system according to the present invention;

Fig. 3 is a front elevational view of the preferred embodiment of a ticket-dispensing unit according to the present invention;

Fig. 4 is a partial rear elevational view of the embodiment of Fig. 3;

Fig. 5 is a schematic view of the ticket transport mechanism of the preferred embodiment;

Fig. 6 is a schematic view of a leading edge ticket sensor of the preferred embodiment;

a Fig. 7 is a ^{perspective} ~~partial elevational~~ mechanical view of the ticket drive and burster assembly of the preferred embodiment;

Fig. 8A is a diagrammatic illustration for explaining the alignment process of the ticket drive and burster assembly of Fig. 7;

Fig. 8B is a second diagrammatic illustration for explaining the alignment process of Fig. 8A;

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a perspective
Fig. 9 is ~~an elevational mechanical~~ view of an imprinter assembly of the preferred embodiment;

Fig. 10 is a functional block diagram of the preferred embodiment;

Fig. 11 is an electronic block diagram corresponding to Fig. 10; and

certain
Fig. 12 is a flowchart illustrating ~~fundamental~~ operations of the preferred embodiment.

GENERAL
~~DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT~~

Referring now to the drawings, and initially to Fig. 1 thereof, a system 10 for dispensing lottery tickets includes a central computer 12 and three remote ticket-dispensing units 14, 16 and 18. Although the illustrated embodiment includes three such ticket-dispensing units, it will be understood that any number of units may be employed, and indeed it is anticipated that a very large number of units will be employed in a state-wide or nation-wide lottery system. For the purposes of the present description, the lottery will be assumed to be a state-wide lottery run by a state authority. However, the present invention is applicable to other lotteries such as nation-wide or city-wide lotteries.

Each unit 14, 16, 18 is located at a separate location across the state in, for example, grocery stores, liquor stores and the like, and functions completely independently of the other units. Each remote unit 14, 16, 18 is independently operated by a sales agent or vendor, generally the store owner who sells the lottery tickets as part of his business, receiving a percentage of the purchase

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price of each ticket sold from the state agency which runs
 the lottery. However, each unit 14, 16, 18 ^{can be placed} independently
 and selectively ~~placeable~~ in communication with central
 computer 12 through a respective modem 20, 22, and 24. Each
 modem 20, 22, 24 is advantageously positioned within its
 associated unit 14, 16, 18 at the particular location, or ^{alternatively, it}
 may be ^{located} adjacent thereto. Advantageously, each of the modems
 20, 22 and 24 is a dial-up modem which is actuated by its
 own conventional touch-tone telephone circuitry ~~(Fig. 10)~~ to
 access a telephone line between ^{each of} ~~modem~~ ^{the} modems 20, 22, 24 and central
 computer 12.

In accordance with an aspect of the present
 invention, each unit 14, 16, 18 independently records each
 ticket sale ~~thereat~~ and stores sales data indicating at
 least the number of tickets sold and, more generally, the
 numbers, types and prices of different tickets sold. At
 periodic intervals, such as several times a day, once each
 day or once each week, each unit 14, 16, 18 is placed in
 communication with ^{the} ~~central computer~~ 12 by central computer
 12 dialing-up the respective modem 20, 22, 24. Once
 temporary communication is established, the ~~respective~~ sales
 data is transmitted from the units 14, 16, 18 to ^{the} ~~central~~ central
 computer 12. ^{new} Central computer 12 ~~can~~ operates as a central
 data processor to perform all the necessary accounting
 functions, including determining such information as the
 volume of sales and money due to or from each sales agent at
 his particular location. In addition, each unit 14, 16, 18
 itself performs accounting functions on its own sales data.
 The transfer of the sales information from each unit

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14, 16, 18 takes only a very short period of time, usually on the order of seconds, and so the time during which modems 20, 22 and 24 ~~respectively~~ access the telephone lines is very brief, resulting in significant cost savings over systems which may require a continuous or extended connection over the phone lines to a central control ^{station}.

Thus, in accordance with the present invention, it is unnecessary for the sales agent to prepare any paperwork to keep track of ticket sales, to make any accounting of the sales or to otherwise report such sales to the state authority. Similarly, it is unnecessary for the state authority to physically collect such sales data from the numerous individual sales agents. Instead, central computer

12, at the appropriate time several times a day, ^{once each week,} each day or ^{week,} simply actuates each modem 20, 22, 24 by dialing the telephone number assigned thereto, as is conventional, and the sales data is transmitted from the respective unit 14, 16, 18 to central computer 12 without further intervention or action by either the agent or the state authority. This insures that sales data is sent promptly to central computer 12 ^{with minimum} ~~without the~~ risk of tampering and without ^{the} possible delays or losses ^{at} ~~through the mails~~. Furthermore, both the state

authority using central computer 12 and the sales agent using his unit 14 have access to a current, up-to-the minute sales accounting of how many tickets have been sold and how much money is due. The state authority can then ^{determine} ~~know~~ each sales agent's current ^{stock} ~~stock~~ of tickets and can resupply him before the stock runs out, ^{this capability is commercially} ~~which is a valuable commercial~~

^{advantage for stabilizing cash flow, and can also} ~~can be used to~~ efficiently close out a particular game. Central computer

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a 12 may account for each unit 14, 16 and 18 separately, and may also combine the sales data from all the units so as to provide a state-wide summary.

Of course, the sales data advantageously includes more data than just the number of tickets sold. It should include, for example, an agent number identifying the sales agent, a machine number identifying the particular remote unit, the sales agent's commission, frequently in the form of the percentage of the sales price, winning ticket values which the sales agent has redeemed, and the ticket purchase price, frequently in one dollar increments. Other sales data which may be automatically recorded by units 14, 16, 18 may be transmitted from an electronic cash register or entered by the agent on a control panel, as discussed below. This sales data, plus other types of sales data related to the particular ^{use} application, may also be included and transmitted to central computer 12.

Remote units 14, 16, 18 are responsive to accounting data calculated from the respective sales data stored therein to print a report for the sales agent, summarizing the accounting results. The format of these reports may vary with the particular lottery system used, but may advantageously take the form of the exemplary reports illustrated in Figs. 2A-D. Fig. 2A illustrates a daily sales report, Fig. 2B illustrates a weekly sales report, Fig. 2C illustrates a weekly invoice and Fig. 2D illustrates a current sales report. As shown, each report is individualized to the particular unit 14, 16, 18.

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Since each unit 14, 16, 18 can record both the number of tickets sold at the particular location and also the amount of money paid by the sales agent in redeeming certain types of winning tickets, the reports are then a ^{thorough} ~~through~~ reflection of the sales and redemption activity and may completely replace the use of invoices between the state authority and individual sales agents.

^{computer} Central ~~computer~~ 12 can be programmed ^{to} dial up any modem 20, 22, 24 in off hours to interrogate it and get an up-to-the minute accounting, which is an advantage in increasing cash flow. Modems 20, 22, 24 may alternatively include a timer mechanism programmed so as to automatically dial up central computer 12 at preselected intervals to ensure that the sales data is regularly transmitted. For security reasons, the sales agent advantageously should not have the responsibility for connecting central computer 12 and modems 20, 22, 24.

Central computer 12 is operative to send message data indicative of messages to units 14, 16, 18. These messages may be individualized for the respective units 14, 16, 18, for example stating whether the particular sales agent is behind in his payments. Alternatively, central computer 12 may send the same message to all units 14, 16 and 18. Such a message may be, for example, advertising announcing a new game or a special jackpot. These messages may be intended either for the agent or for the customers and, as discussed below, an advantageous embodiment of unit 14, 16, 18 includes separate message display sections for the two types of messages.

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Referring now to Figs. 3 and 4, a preferred embodiment of unit 14 will now be described. It will be understood that units 14, 16, 18 and all others within the lottery ticket distributing system are intended to be identical. Therefore, while a detailed description is given only with respect to unit 14, it will be understood that this description applies equally well to all other units within the system.

Referring first to Fig. 3, unit 14 is constructed as a box-like module advantageously designed to rest upon the surface of a counter 26 or the like. Unit 14 includes a ^{housing with a} front surface 28 which, when unit 14 is positioned on counter 26 and is in operation, is intended to face the sales agent or vendor standing behind ^a counter 26. ~~a~~ ^{new} ~~corresponding~~ ^{an} opposed back surface 30 of unit 14 is intended to face the customers when unit 14 is in operation. In accordance with an ^{advantageous} ~~important~~ aspect of the present invention, a control panel 32 including all necessary agent-operated controls is mounted at front surface 28, while a dispensing outlet 34 is manually accessible at back surface 30 by the customers. Thus, the sales agent may quickly and efficiently enter a sales command, for example in the form of the number of tickets to be dispensed, on control panel 34 at front surface 28, while the tickets are automatically presented in response to the command in dispensing outlet 32 at back surface 30. This structure eliminates the need for the sales agent to physically

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receive the lottery tickets from unit 14 and to personally hand the lottery tickets to the customer, as is done in conventional lottery ticket dispensers.

As illustrated in Fig. 3, control panel 32 is mounted at front surface ²⁸ ~~32~~ on an upper portion 36 thereof. Upper portion 36 ^{is} ~~may be provided at an~~ inclined angle relative to front surface 28 for ergonomic reasons ^{that is} to permit comfortable access to control panel 32 ^{the} but the angle of inclination ^{of panel 32} is limited so that control panel 32 remains in substantially opposed relation to back surface 30. The angle of inclination is limited not only so that control panel 32 may be easily viewed and operated by the sales agent, but also so that it will be substantially blocked from view by any customer standing in front of counter 26 and facing back surface 30. This ^{minimizes the chances of} ~~prevents~~ any interference by the customer in reaching towards control panel 32 in an attempt to operate unit 14 in an unauthorized manner.

Control panel 32 includes a keypad 37 having a plurality of push-buttons 38 for entering data and commands into a control circuit 40 (Fig. 10) ^{which is located inside of the} ~~within~~ unit 14. Control ^{circuit 40 is a microprocessor-based} ~~unit 14 may be a microprocessor-based~~ circuit or minicomputer which controls the operation of unit 14 ^{and is} ~~described in greater detail below.~~ ^{It will be} Push-buttons 38 include numerical buttons bearing the digits 0-10, and an entry

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button for entering the corresponding numbers ^{into} control circuit 40. Push-buttons 38 further may include a cash button, a report button, a sign-on button, a ticket length load button, a storage access button, and all other buttons necessary for entering all appropriate data ~~entry~~ and commands in accordance with the functions described below.

In particular, when unit 14 has been activated, any number of tickets from 1 through 999 may be dispensed simply by depressing the appropriate numerical push-button ~~38~~ and the entry button 38. Thus, if the sales agent depresses the numerical push-button 38 bearing the digit "1", a confirming ^{number} display will appear on an operator LCD ^{display} device 42, discussed below, and the sales agent may depress entry button 38 and a single lottery ticket will be dispensed and deposited in dispensing outlet 34 at back surface 30 (Fig. 4). The customer simply reaches into dispensing outlet 34 to remove the ticket. Alternatively, if the sales agent depresses the numerical push-button ~~38~~ bearing the digit "5" and then ^{he} entry button 38, remote unit 14 will automatically deposit five separated lottery tickets into dispensing outlet 34. There is no need for the sales agent either to count out the tickets or to physically receive the tickets and hand them to the customer. This significantly speeds up the ticket selling process, as the sales agent may concentrate on receiving money and giving change, a task which is both easier to perform ~~when not handling tickets~~ and more likely ~~when the agent is not handling tickets~~ to be accurate. ^{Each} ticket sold is counted, advantageously in response to operation of the mechanism which provides a separated ticket to dispensing outlet 34, and the number is

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(Figure 10)
 stored as sales data in memory within control circuit 49.
 Other sales data, such as the price of the tickets ~~may~~ *may* also
 be stored ~~therein~~ *in memory*. When communication with central computer
 12 is established, the sales data is send out from the
 memory by control circuit 40 and fed out over the phone line
 to ~~central~~ *the* central computer 12.

Control circuit 40 similarly ~~may~~ receive ~~message~~ *the*
 data from central computer 12 and stores it in the memory
 along with the sales data and the accounting data calculated
 therefrom. The report push-button 38 causes a selected one
 of the reports illustrated in Figs. 2A-D to be printed, for
 example on a tape by a thermal printer 140 (Fig. 10) and
~~presented at front surface 38 through slot 39.~~ *in the front surface 38, through a slot 39, issued*
 [As mentioned
 above, central computer 12 may send messages to unit 14.

Some of these messages will be intended for the sales agent
 and not for customers, and so are considered to be control
 messages rather than advertising messages. To display these
 control messages, a display device, such as ~~a~~ *the* conventional
 LCD ~~device~~ *display* 42 is provided in control panel 32 on ~~an~~ *the* inclined
 surface 36 ~~and~~ adjacent keypad 37. In accordance with
 conventional techniques, central computer 12 can transmit
 message data indicative of these messages through modem 20
 whenever modem 20 is actuated to transmit sales data from
 unit 14 to central computer 12. This down-loading of
 message data is achieved without any need to request the
 same by the sales agent. The placement of LCD display 42 on
 inclined surface 36 further shields the control message
 displayed thereon from the eyes of customers.

new IP *PP*
 Alternatively, the control or other messages may be printed
 by thermal printer 140 on the tape and presented through
 slot ~~39~~ *39*.

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a A key 44 is also provided on control panel 32 for
the purpose of controlling the operating mode of unit 14.
In a locked or "off" mode of operation, unit 14 is disabled
both from receiving commands from control panel 32 and from
communicating with central computer 12 through modem 20. *new IP* *a* In
a "normal" mode of operation, unit 14 is enabled to receive
commands entered on control panel 32 and to dispense
tickets, but remains disabled from communication with
central computer 12. *new IP* *a* In a "communication" mode of operation,
unit 14 is enabled for receiving commands through control
panel 32 and is responsive to modem 20 to permit two-way
communication between *the* unit 14 and *the* central computer 12. In
the communication mode, unit 14 and modem 20 will answer a
telephone call from central computer 12, or may be actuated,
as by dialing the telephone circuitry within modem 20 to
place a telephone call to central computer 12, and to
thereafter exchange information. Key 44 has three different
positions respectively associated with the three different
operating modes of unit 14. *new IP* *a* Advantageously, key 44 must be
inserted into unit 14 and turned to place unit 14 in either
of the normal or communication modes, and is removeable from
unit 14 only when it is in the locked position to place unit
14 in the locked mode.

a A second message display device 46, advantageously
an LCD device, is located at back surface 30, advantageously
on an upper inclined portion 48 thereof, for easy viewing by
the customers. When message data from central computer 12
contains ~~advertising data indicative of~~ an advertising
slogan or the like, a corresponding message *will* *a* may be displayed
on LCD display 46. Control circuit 40 in remote unit 14

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distinguishes between the two types of data and selects the appropriate LCD device 42, 46 or thermal printer 140 ^(figure 10) ~~for~~ ^{to display the message} ~~display~~ ^{TICKETS PARATOR OR "BURSTER"}

A highly advantageous aspect of the present invention is that the lottery tickets within unit 14 are stored in a fan-fold ^{strip or "stream"} ~~stream headed by a leading ticket~~ and are not, as in ^{most} conventional lottery tickets dispensers, ^{stored} ~~provided~~ in stacks of pre-cut tickets for individual dispensing. Prior art ticket dispensers which did store the tickets in pre-cut form had the difficulty that two tickets ^{could be dispensed accidentally} ~~could accidentally~~ be dispensed instead of a single ticket when two tickets within the stack were stuck together. ^{essentially eliminates} ~~The present invention completely removes~~ the risk that two or more tickets may be dispensed ^{unintentionally} ~~in place of a~~ single ticket first, ^{this is accomplished, in part} ~~by storing the tickets in a fan-fold~~ ^{and} ~~stream and secondly~~ by providing a highly advantageous ticket separation ^{or "burst"} ~~mechanism~~ for separating the leading ticket from the stream of tickets. This novel separation ^{eliminates} ~~addresses and removes~~ a difficulty which arises when tickets are to be dispensed from a fan-fold stream. ^{new TP} ~~In~~ particular, a most common item fed from a fan-fold stream is the paper used to feed a printer controlled by a computer or the like. Such paper is relatively thin and flexible and ^{often} ~~has~~ a column of perforations or holes at either side ^{so that it can be driven} ~~which may be fed into and positively held~~ by a tractor feed ^{mechanism} of the printer. Such a feeding ~~mechanism~~ provides automatic lengthwise and widthwise alignment of the paper as it is fed through the printer. However, lottery tickets conventionally do not have such columns of perforations and, indeed, are constructed from laminated layers of paper or

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new IP cardboard so as to be relatively stiff. *Q* *IP* ~~the~~ problem faced and solved by the transport mechanism in accordance with the present invention is how to ensure that each ticket as it becomes the leading ticket will be separated from the next following ticket precisely along the joinder line between the tickets. In such a fan-fold scheme, a line of weakness, for example a perforation line, is provided to define each ticket and to permit *fan-folding* ~~folding~~ of the stream of connected tickets. In the illustrated embodiment shown in Fig. 5, each fold contains a single ticket, for clarity of illustration, but in a preferred embodiment a number of tickets, for example five, may be provided within each fold.

new IP *Q* *IP* Simply to provide a knife edge or cutting blade to slice through the stream of tickets is disadvantageous, since such a knife edge may cut through the ~~stream~~ *tickets* at any point, such as in the middle of a ticket, *thereby* ~~and so~~ a highly precise alignment device *usually* must be provided with such a knife edge to bring it into precise alignment with the joinder line between tickets. *Q* *IP* The present invention provides a novel separation mechanism which bursts the leading ticket from the next following ticket along the line of weakness therebetween, instead of cutting the two tickets apart. Not only does this inherently reduce the risk of producing only half a ticket, but also it provides an automatic mechanical alignment of the tickets to their proper position for bursting. *Q* *IP* A separate alignment mechanism is also provided to adapt the burster mechanism to tickets of different, selected lengths and cooperates with the burster mechanism

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to provide precise, rapid separation of each ticket from the stream.

More particularly, an advantageous embodiment of the ticket transport/separation system in unit 14 is schematically illustrated in Fig. 5. A plurality of individual tickets 49 are connected in a ^{strip or} fan-fold stream 50 which is drawn from the top of a stack 51. The tickets 49 are provided by the state authority in ^{fan-fold stock form} stack 51, which is compact and easily transportable ^{separately} when including, for example, ^{as many as} 1500 tickets. The illustrated embodiment shows a single ticket 49 within each fold, but it will be understood that a greater number of tickets could be provided within each fold. ^{Referring now to Figure 6, the ticket strip 50} ~~Stream of tickets 50~~ is headed by a leading ticket 52 which is connected to a next following ticket 54 along a line of weakness 56, ~~(Fig. 6)~~ and it will be understood that each successive following ticket is separable from its neighbors by similar lines of weakness. ^{Returning to Figure 5, ticket strip 50} ~~Stream of tickets 50~~ is fed along a dispensing path 57 from a storage area 58 holding stack 51 within unit 14 towards ^{the} dispensing outlet 34, and is transported along dispensing path 57 by a transport mechanism including opposed upper and lower feed rollers 60, 62 and opposed upper and lower exit rollers 64, 66. ^{the leading} ~~Leading~~ ticket 52 is separated from next following ticket 54 by a burster wheel 68 positioned adjacent dispensing path 57 at a bursting position 70 ~~therealong~~. Consequently, ~~upper and lower~~ feed rollers 60, 62 ^(also see Figure 7) are driven separately from ~~upper and lower~~ exit rollers 64, 66 so that ~~upper and lower~~ feed rollers 60, 62 transport ^{the} stream of tickets 50 from ^{the} storage area 58 up to ^{the}

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a bursting position 70, ^{exit} while upper and lower exit rollers 64, 66 operate as "kick-out" rollers to discharge the separated leading ticket 52 from dispensing path 57 into dispensing outlet 34. ^{As shown in Figure 7, a} drive motor 72 (Fig. 8) is provided to drive upper and lower feed rollers 60, 62, while a separate "kick-out" motor 74 is provided to drive ^{the} upper and lower exit rollers 64, 66.

a When stream of tickets 50 has been transported to bring the line of weakness 56 between ^{the} leading ticket 52 and next following ticket 54 to ^{the} bursting position 70, ^a burster wheel 68 is moved into bursting contact therewith in order to separate leading ticket 52 from next following ticket 54. ^{and in perspective in Figure 7} As indicated schematically in Fig. 5, ^a burster wheel 68 is advantageously in the form of a circular burster blade which, in an ^{advantageous} ~~important~~ aspect, has a dull, rounded edge which does not cut stream of tickets 50, but rather exerts pressure against the top of stream of tickets 50 in a direction to deflect it from dispensing path 57. ^{PP} When line of weakness 56 is at bursting position 70, upper and lower exit rollers 64, 66, ^{grip} are gripping a portion of ^{the} leading ticket 52, while ^{exit} upper and lower feed rollers 60, 62 are similarly ^{grip} gripping a following portion of ^{the} stream of tickets 50, with the result that stream of tickets 50 is held between the two sets of rollers against substantial deflection from dispensing path 57. This enables the bursting force from bursters 68 to separate the tickets 52, 54. However, the grip on stream of tickets 50 by upper and lower feed rollers 60, 62 and upper and lower exit rollers 64, 66, ^a respectively, ~~nevertheless~~ permits a slight deflection of

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strip of
~~stream~~ tickets 50 from dispensing path 57 in response to
 pressure exerted by ~~the~~ burster wheel 68. This slight
 deflection provides a highly advantageous and novel
 alignment system in accordance with the present invention.
 The alignment system operates as follows.

In order for burster wheel 68 to effectively burst ~~the~~
 leading ticket 54 from stream tickets 50 at line of weakness
 56, it must be sufficiently aligned with lines of weakness
~~56 so as to exert pressure almost directly thereon.~~
at least close to the line.
 Clearly, if burster wheel 68 is brought into bursting
 contact with leading tickets ~~54~~ at a middle portion thereof,
 leading tickets 54 will either be torn or bent and almost
 certainly will not be properly dispensed. A separate
 alignment mechanism, discussed below, is ~~effective~~ *used* to bring
 line of weakness 56 to within at least a predetermined
 incremental distance of bursting position 70, ~~but even~~ *Even*
 within this incremental distance it is still advantageous to
 have line of ~~weakness~~ *weakness* 56 precisely aligned with bursting
 position 70, for best results. *As in any such system*
~~Furthermore, all systems will~~
~~have a certain amount of slippage and tolerance, however,~~
~~in accordance with the present invention, the very action of~~
 burster wheel 68 in combination with upper and lower exit
 rollers 64, 66 and upper and lower feed rollers 60, 62
 provides a mechanical alignment to ~~remove~~ *correct* any errors within
 the incremental distance. *Specifically, as illustrated in*
 Fig. 8A, the force from burster wheel 68 is exerted at
 bursting position 70 along the direction of arrow A. In
 Fig. 8A, it is assumed that line of weakness 56 has fallen
 short of bursting position 70 by a distance a. Since the

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force from burster wheel 68 is not exerted directly on ^{the} line
 of weakness 56, ^{the tickets} ~~line of weakness 56~~ will not immediately
 begin to burst apart but instead tickets 52 and 54 will be
 deflected slightly ^{downwardly from} ~~from dispensing path 57, as indicated in~~
~~a solid line~~, and will tend to bend first at ^{the} line of
 weakness 56 into a V shaped configuration indicated in ~~the~~
~~dashed line~~ ^{lines in the drawings.} Consequently, tickets 52 and 54 will tend to
 slip ^{longitudinally along the} ~~along dispensing path 57~~ so as to bring the low point
 of the V-shaped ^{ticket array} ~~into contact with burster wheel.~~ ^{the} In Fig.
 8A, tickets 52 and 54 will tend to move ^{the ticket strip 50 makes} ~~in the direction of~~
 arrow B ~~feeding forward stream of tickets 50~~ until ^{the} line of
 weakness 56 is properly aligned with bursting position 70.
 Correspondingly, as shown in Fig. 8B, when ^{the} line of weakness
 56 is slightly in advance of ^{the} bursting position 70 by
 distance b, the force of burster wheel 68 will cause ^{the strip 50} ~~tickets~~
 52 and 54 to move slightly along the dispensing path in the
 direction of arrow C, ^{reverse-feeding the strip} ~~reverse feeding stream of tickets 50~~
 to again bring line of weakness 56 into precise alignment
 with bursting position 70. This is an advantage of the
 burster mechanism ^{or} ~~in accordance with the present invention~~
~~which is totally unavailable in any prior systems using a~~
~~cutting blade to separate tickets or the like from a stream~~
~~and represents an important feature of the present~~
~~invention.~~ ^{reflected slightly downward.}
 It will be clear that if ^{if} tickets 49 are always of
 a predetermined, uniform length, the position of burster
 wheel 68 along dispensing path 57 could be predetermined and
 the mechanical self-alignment action just described could be
 sufficient to maintain proper alignment. The system

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according to the present invention has the additional feature, however, of accepting and dispensing tickets of different lengths and includes an alignment mechanism for bringing line of weakness 56 to within at least a predetermined incremental distance of bursting position 70 regardless of the length of tickets 49. ^{new PP} As illustrated in Fig. 5, a ticket sensor 76 is positioned along dispensing path 57 at a sensing position 78 downstream from bursting position 70 and upstream of ^a ~~the upper and lower~~ exit rollers 64, ^{and} 66. Ticket sensor 76 operates as a leading edge detector to detect the leading edge 80 of leading ticket 52 (Fig. 6) after the previous leading ticket has been separated and dispensed by the action of upper and lower exit rollers 64, 66 while ^a ~~the upper and lower~~ feed rollers 60, 62 are held stationary. ^{new PP} As shown in Fig. 6, ticket sensor 76 ^a ~~may be~~ is a conventional optical sensor having a U-shaped cavity 82 through which ^a ~~stream of tickets~~ ^{the ticket strip} 50 passes to interrupt a light beam supplied to a light sensor 84. In accordance with known principles, light sensor 84 will detect the light beam from the time when the previous leading ticket is dispensed until the time that leading edge 80 of leading ticket 52 enters cavity 82 to interrupt the light beam. The distance between ticket sensor 76 and bursting position 70 ^a is predetermined in the construction of ~~remote~~ ^{the dispensing} unit 14. If this predetermined distance is, for example, 1/2 inch and tickets 49 are identified as 2 inches long, then detection of leading edge 80 will indicate that ^a ~~stream~~ ^{the strip} of tickets 50 must be driven an additional 1 1/2 inch to bring line of weakness 56 to bursting position 70. The spacing of ^a ~~upper~~

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^a ~~and lower~~ exit rollers 64, 66 relative to ~~upper and lower~~
^a feed rollers 60, 62 is advantageously such that both leading
 ticket 52 and next following ticket 54 will be respectively
 gripped thereby regardless of the length of leading ticket
^a 52. The length of tickets 49 may therefore vary ~~from fan~~
^a ~~fold to fan fold~~, but only within a predetermined range, for
 1379 example, 1-1/4 inches to 2 inches. The length may be
 entered on control panel 32 by actuation of length load
 push-button 38 if tickets of different lengths are being
^a sold, or may be set by ^{the} central computer 12. Of course, if
 longer or shorter tickets are to be used, the relative
 positions of feed rollers 60, 62, exit rollers 64, 66,
 bursting position and sensing position 78 may be adjusted.
^a This creates the appropriate gripping of ~~stream of tickets~~ ^{the ticket strip}
^a 50 by the two pairs of rollers, ^{Wider} although wider spacing may
 be acceptable depending on the rigidity of tickets 49.
^a ^{Referring now to figures 5 and 7,} In order to achieve the proper movement of stream
 of tickets 50 to bring line of weakness 56 to bursting
 position 70, the illustrated embodiment uses an alignment
 mechanism including a code wheel 86 and code wheel sensor
 88. In accordance with known techniques, code wheel 86 is
 divided into a plurality of divisions 90 each corresponding
^a to a ^{single} ~~same~~ predetermined incremental distance of ticket
 movement along dispensing path 57. Code wheel sensor 88
 detects the rotation of code wheel 86 through each division
^a 90 and produces a pulse in ^{Figure 5} response thereto. As shown in ^{Figure 5}
^a ~~Fig. 1,~~ ^{and the} code wheel is mounted on the same shaft 97 as ^{the} upper
^a ~~and lower~~ feed rollers ~~62 and 64~~ ⁶⁰ which move ^{the} stream of
^a ticket ^{strip} 50. Code wheel 86 will therefore measure each

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incremental distance moved by stream of tickets 50 and control circuit 40, counts the number of pulses to permit movement of stream of tickets 50 by the appropriate distance to bring line of weakness 56 to bursting position 70.

Control circuit 40 also determines the direction of movement, since stream of tickets 50 will need to be forward fed or reverse-fed, depending on the particular unit 14 and the length of tickets 49. For example, if the predetermined incremental distances is 1/4 inch and stream of tickets 50 must be moved 1 1/2 inches in the forward direction to bring line of weakness 56 into bursting position 70, feed rollers 60, 62 are driven forwardly until code wheel 86 produces six pulses, moving the stream of tickets 50 forwardly for six incremental distances to total 1 1/2 inches. In ~~a practical~~ ^{actual} embodiment the incremental distance will generally be much smaller than 1/4 inch, and the number of pulses provided will be correspondingly much greater so as to provide sufficient accuracy of alignment. Code wheel 86 is controlled to produce the proper number of pulses by control circuit 40 in response to the previously entered ticket length setting stored therein. It will be apparent that tickets of a greater or lesser length may readily be accommodated by producing a greater or fewer number of pulses from code wheel 86.

Fig. 7 is a more structurally complete illustration of the ticket drive and bursting assembly. In particular, it will be seen that drive motor 72 operates through a gear train including gears 92 and 94 to drive lower feed 62 directly and upper feed roller 60 thereby,

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^{the}
~~while~~, "kick-out" motor 74 drives lower exit rollers 66 ^{at}
 directly through a gear train partially illustrated in gear
^{upper exit rollers 64 are driven by rollers 66}
 96, and upper exit roller 64 thereby. ¹ Code wheel 86 is shown
 mounted on the same shaft 97 on which upper feed roller 60
 is mounted to provide an accurate measurement of ticket
 displacement. Although driven lower feed roller 62 may slip
 while stream of tickets 50 is stationary, upper feed roller
 60 is rotated only when stream of tickets 50 moves, thereby
 providing an accurate output from code wheel 86. ^{PP} Burster
 wheel 68 is shown mounted on a burster block 98 driven by a
 burster motor 100 through a cable spool arrangement 102
 including tensioning spring 104. When burster block 98 is
 moved from the illustrated rest position towards
 interception with dispensing path 57 through the action of
 cable spool device 102, burster wheel 68 will come into
 contact with stream of tickets 50 at the side thereof
 initially and then across stream of tickets 50 to burst the
 same apart. Limit switches 106, 108 provide respective
 indications of the limit positions for burster block 98 to
 prevent burster block 98 from crashing into the side of the
 mechanism. ^{PP} Burster block 98 is moved from right to left to
 burst ^{the} ⁵² ~~one~~ leading ticket ⁵⁴, then left to right to burst the
 next leading ticket 54, and so on. Limit switches 106, 108
 will therefore indicate the position of burster block 98
 after each bursting motion. Thus, each bursting motion of
 burster block 98 from left to right or right to left
 represents the separation of a single ticket 49 and so may
 be used to digitally count the number of tickets sold. Each
 bursting motion may be sensed through one of limit switches

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106, 108 or by a separate sensor, and control circuit 40 is responsive thereto to increment the number of tickets sold as part of the stored sales data. The longest contemplated ticket length which may be input on control panel 32 is selected to be less than twice the shortest contemplated ticket length. For instance, the shortest length may be 1 1/4 inches while the longest length is 2 inches. This is a security measure to prevent a dishonest employee from setting the stored length to twice the actual ticket length, thus dispensing two tickets for each bursting motion of burster block 98. Of course, if the length is set only at central computer 12 or only with a special access code at control panel 32, this length limitation is unnecessary.

IMPRINTING

u In accordance with a further aspect of the present invention, vendor identification data, such as the name and address of the sales agent, is automatically printed on each ticket 49 prior to dispensing. This assists the customer if he has any complaints by identifying where and from whom he bought the ticket, or if the particular game permits only the sales agent who sold ticket 49 to redeem it. This is also useful in detecting fraud should ^{dispensing} remote unit 14 be ^{stolen} and set in operation at another location. ^{As} illustrated in Fig. 9, an imprinter assembly 110 includes an imprinter roller 112 including an impression of the vendor identification data, a pressure roller 114 in driving contact with imprinter roller 112 on the opposite side of dispensing path 57 so as to receive stream of tickets 50 ^a ~~drivingly~~ therebetween, and an inker roller 116 in rolling contact with imprinter roller 112 so as to provide an ink

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supply thereto. Imprinter assembly 110 is not driven by any motor, but rather imprinter and pressure rollers 112, 114 are rotated by the motion of ^{the strip} ~~stream~~ of tickets 50 therebetween, while ink roller is rotated by the rotation of imprinter roller 112 to bring the impression on imprinter roller 12 into inked contact at least once with each ticket 49. Of course, the position of the inked contact on ticket 49 will depend on the length thereof, but the diameter of imprinter roller 112 is calculated so that the vendor identification data will appear at least once on each ticket 49 within the predetermined range of ticket lengths.

ACCESS MONITORING

A further security feature of unit 14 is intended to alert the sales agent to theft of tickets normally stored in unit 14. As mentioned above, the tickets are normally stored in a fan-fold stack 51 in storage area 58 of unit 14.

Storage area 58 is accessible only through a normally closed locked door 118 (Fig. 4). A lid switch 120, ^{see lower right-hand portion of Fig. 10} ~~(Fig. 10)~~ is

connected to ^{the} door 118 and to control circuit 40 so as to detect each opening of ^{the} door 118 permitting access to the interior storage area 58 to remove tickets therefrom and deposit tickets therein. Each such opening may cause an

alarm to sound and is also recorded in control circuit 40. ^{Operation} ~~and operation~~ of an access control push-button 38 on control panel 32 will produce a print-out of the number of openings

each day on the tape ²⁴ ~~also used to provide the reports~~ ~~through slot 39~~. The sales agent, being financially

responsible for each ticket received from the state authority, will be aware of each time he has opened door 118 to deposit tickets. Therefore any additional openings will

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indicate to the sales agent that someone else has been tampering with unit 14 and provides an additional security check. Such an access detecting system may also be applied to a locked drawer or other area in which tickets may be stored.

CONTROL CIRCUIT

Fig. 10 is a functional diagram of control circuit 40 in unit 14 and the various devices and systems which it controls through software and firmware. Briefly reviewing the previously discussed features, modem 20 provides the conduit for message data from central computer 12 over the phone lines and the sales data from unit 14 stored in the memory ¹²² 118. Proceeding counterclockwise from modem 20, the sales data, accounting data and the like are stored in memory 122, advantageously in the form of a random access memory. Lid switch 120 which detects each opening of door 118 provides its data to memory ¹²² 118. Key switch 124 detects the three different positions of key 44 and provides a signal to modem 20 to permit communication between modem 20 and unit 14 only in the communication mode, and signals to exit or "kick-out" motor 74, drive motor 72 and burster motor 100 to permit dispensing of tickets in the normal and communication modes. Code wheel 86 receives signals from leading edge ticket sensor 76, which also provides a feed-jam alarm signal an exit jam alarm signal. Burst position limit switches 106, 108 similarly provide a burst-jam alarm signal should the burster assembly become inoperative, as well as a count of tickets sold.

Customer LCD display 46 and operator LCD display 42 may be controlled through keypad 37 to blink or scroll

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the respective messages. Operator LCD display 42 is also adapted to display error messages generated by control circuit 40 in response to various alarm signals, such as those generated by lid switch 120, ticket sensor 86, etc.

not Control panel keypad 37 is operative to send signals to all the various devices, while beeper 126 provides an alarm indication for a variety of error conditions, including an electrical ~~brown out sensed by brown out~~ ^{"brown-out" sensed by brown-out} sensor 128, a lid opening sensed by lid switch 120, jam alarms from drive motor 72, burst motor 100 and burst limit switches 106, 108, a printer paper empty sensor ~~128~~ ¹²⁹, and in response to operation of keypad 37.

It is contemplated that the sales agent will redeem certain types of winning tickets and will deposit the money from all sales into a cash register. Such a cash register may be electronic and connected to control circuit 40 through an RS-232 cable 130 to automatically record this type of sales data. An additionally, an external sign may also be attached to control circuit 40 by RS-232 cable 130 to receive the same type of advertising messages as displayed on customer LCD display 46. For example, the external sign may be mounted outside the store where unit 14 is located.

Fig. 11 is a more detailed electronic block diagram corresponding to functional block diagram Fig. 10 and illustrates the currently contemplated best mode circuit elements for implementing the difference devices and operations of control circuit 40 and unit 14.

Figure 12 is a FLOW CHART
flow chart illustrating a control program 200 for unit 14 in performing some of the above-described

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a functions ~~is illustrated in Fig. 12~~. In accordance with known techniques, a CPU 150 (Fig. 11) within control circuit 40 executes control programs such as program 200 out of a read-only memory (ROM) 152. Control program 200 starts at step 201 and thereafter in steps 202, 203 and 204, determines whether CPU 150 has received an input from keypad 37, an input from central computer 12 or an input through another portion of control circuit 40 from the various devices connected thereto. Otherwise, control proceeds to another portion of program 200 to perform a function not illustrated in Fig. 12. At step 202, if an input was received from keypad 37, program 200 proceeds to step 205, wherein it is determined whether a ticket number command has been received, ordering the dispensing of N tickets. If such a ticket number command has been received, program 200 proceeds to step 206 wherein stream of tickets 50 is moved to bring line of weakness 56 to bursting position 70, with a following ticket being printed during such movement. In step 207, leading ticket 52 is burst from next following ticket 54 and in step 208 the dispensing of another ticket is recorded as sales data. In step 209, it is determined whether N tickets have been dispensed and if not, control returns to step 206 so that the next leading ticket 52 may be dispensed. If N tickets have been dispensed in step 209, control returns to step 202. In step 205, if a ticket number command has not been received, program 200 proceeds to step 210 wherein it is determined whether the length L of the tickets needs to be set. If so, in step 211 the new length is stored and control returns to

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step 202. If at step 210 it is determined that some other command has been entered from keypad 37, control proceeds to another portion of program 200 (not illustrated) where such command may be executed.

If instead of an input from keypad 37, an input from central computer 12 has been received, then program 200 proceeds from step 203 to step 212 to determine whether an accounting procedure is to be followed. If so, program 200 proceeds to step 213, wherein sales data may be transmitted to central computer 12 and/or accounting data may be calculated, and then control returns to step 202. Of course, accounting data may also be calculated at other times without a specific input from central computer 12. On the other hand, if at step 212 it is determined that something other than an accounting procedure is to follow, program 200 proceeds to step 214 wherein it operates in response to any message or other data received from central computer 12 to display a message and to operate under the control of central computer 12 to perform the commanded function, and thereafter control returns to step 202.

If it is determined at step 204 that an input is received from some device connected to control circuit 40, program 200 proceeds to step 215 wherein it determines whether lid switch 120 has detected the opening of door 118 to ticket storage area 58. If so, control proceeds to step 216 wherein the alarm may be sounded and the access to ticket storage area 58 is recorded. If at step 215 control program 200 determines that some other input has been received from devices connected to control circuit 40,

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program 200 proceeds to step 217 wherein the appropriate action recognizing an error, displaying an error message, sounding an alarm or other appropriate action is taken, whereafter control returns to step 202.

Fig. 12 illustrates only some of the functions of unit 14 and illustrates those only in very general terms. It will be understood by one skilled in the art that the order of some of the steps in program 200 may be altered, with additional steps being added to handle the additional functions described above and to include further functions consistent with the described operation of unit 14.

The above description has been given on a single preferred embodiment of the system and method for distributing lottery tickets in accordance with the present invention, and it will be apparent to one skilled in the art that many modifications and changes may be made without departing from the spirit or scope of the present invention. For instance, the burster mechanism is advantageous for all types of tickets and the like stored in a fan-fold stream. Also, the unit could be adapted for Lotto-type games by the addition of a card reader and controllable printer receiving the separated tickets, or the unit could be adapted as a player-activated terminal, for example in an isolated area. Therefore, the scope of the present invention should be determined by reference to the appended claims.

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CLAIMS

1. A system for distributing lottery tickets, comprising:
central data processing means:
a plurality of remote units for dispensing lottery tickets, each said remote unit including memory means for storing sales data indicating at least a number of lottery tickets dispensed by the respective remote unit; and
communication means actuatable for selectively placing said data processing means in communication with at least one said remote unit, said remote unit transferring said sales data to said data processing means and said data processing means transferring at least message data to said remote unit through the communication means.
2. A system according to claim 1, wherein said communication means includes dial-up modem means.
3. A system according to claim 1, further comprising actuating means at said data processing means for actuating said communication means at selected intervals.
4. A system according to claim 1, wherein said communication means is actuated at least once a day.
5. A system according to claim 1, further comprising actuating means at each said remote unit for automatically actuating said communication means at selected intervals.
6. A system according to claim 1, wherein said central data processing means transmits the same message data to all said

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remote units.

7. A system according to claim 6, wherein said message data transmitted to all said remote units includes advertising data.

8. A system according to claim 1, wherein said central data processing means transmits respective message data to respective ones of said remote units.

9. A system according to claim 8, wherein each said remote unit generates respective accounting data in response to the respective sales data stored therein.

10. A system according to claim 9, wherein said central data processing means automatically transmits respective message data related to said respective sales data to the respective remote unit at predetermined intervals.

11. A system according to claim 9, wherein said data processing means includes means for generating an accounting data request signal, said communication means being operable upon actuation for transmitting said accounting data request signal to said remote unit and said remote unit being responsive to said accounting data request signal for transmitting said respective sales data to said data processing means.

12. A system according to claim 1, wherein each said remote unit includes printing means for providing a printout in response to the received message data.

13. A system according to claim 1, wherein each said remote unit includes message display means for presenting a display in response to the received message data.

14. A system according to claim 13, wherein each said

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remote unit includes a dispensing outlet at which the dispensed lottery tickets are removeable, and wherein said message display means is located adjacent said dispensing outlet.

15. A method of distributing lottery tickets, comprising the steps of:

dispensing lottery tickets at a plurality of remote rotations,

memorizing, at each said remote location, sales data indicating at least a number of lottery tickets dispensed at the respective location;

transferring said memorized sales data from at least one said remote location to a central data processing location over an electronic communication system; and

transferring message data from said central data processing location to said remote location over said system.

16. A method according to claim 15, wherein said step of transferring said memorized sales data is performed only at selected times.

17. A method according to claim 15, wherein said step of transferring message data includes transferring the same message data to all said remote units.

18. The method of claim 15, wherein said step of transferring message data includes transferring respective message data to respective ones of said remote locations.

19. A method according to claim 18, further comprising the step of calculating at said central data processing location

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accounting data in response to the respective sales data transferred from respective ones of said remote locations.

120. Apparatus for dispensing lottery tickets, comprising:

a box-like module having opposed front and back surfaces;

ticket storage means within said module for storing a plurality of lottery tickets;

a control panel means mounted at said front surface of said module and being ^{actuable} ~~actuable~~ for initiating dispensing of a lottery ticket;

a dispensing outlet manually accessible at said back surface for receiving a dispensed lottery ticket from said ticket storage means; and

ticket dispensing means responsive to said control panel means for dispensing a lottery ticket from said ticket storage means to said dispensing outlet, whereby said dispensed lottery ticket may be manually removed from said apparatus.

21. Apparatus according to claim 20, wherein said control panel means is actuable to generate a ticket number specification signal indicating a selected number of tickets, said ticket dispensing means being responsive to said ticket number specification signal to dispense said number of tickets.

22. Apparatus according to claim 21, wherein said ticket number specification signal specifies one ticket.

23. Apparatus according to claim 21, wherein said ticket number specification signal specifies a plurality of tickets.

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Sub 25 24. Apparatus according to claim 21, wherein said lottery tickets stored within said ticket storage means are connected, and wherein said dispensing means includes means for separating tickets to be dispensed from the remaining tickets. *a*

25. Apparatus according to claim 20, wherein said tickets stored within said ticket storage means are connected in a fan-fold stream, said lottery tickets being separated from each other along lines of weakness, and said separating means separating said lottery tickets along said lines of weakness.

26. Apparatus according to claim 25, wherein said separating means separates said tickets by bursting said lines of weakness. *a*

5/1 27. Apparatus according to claim 21, wherein said module further includes message display means mounted at said back surface adjacent said dispensing outlet. *2/1*

Sub 26 28. Apparatus according to claim 27, further comprising central data processing means selectively placeable in communication with said module for transmitting at least message data thereto, said message display means being responsive to said message data to display a message indicative thereof. *a*

7 29. Apparatus according to claim 28, wherein said module includes a second message display means mounted at said front surface adjacent said control panel means, said central data processing means further transmitting control message data to said module and said second message display means being responsive to said control message data to display a control message indicative thereof. *6/1*

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Sub 30
B'

30. Apparatus for dispensing tickets, comprising:

ticket storage means for storing a plurality of tickets connected in a fan-fold stream headed by a leading ticket, said tickets being separable from each other along lines of weakness;

transport means for feeding said stream of tickets from said ticket storage means along a predetermined dispensing path; *u*

separation means for separating said leading ticket from said stream of tickets along a leading line of weakness between said leading ticket and a next following ticket (manually accessible outlet means for receiving the separated ticket); and

manually accessible outlet means for receiving the separated ticket.

31. Apparatus according to claim 30, wherein said

a
2 separation means includes a dull *edged* bursting blade

manually
moveably mounted adjacent a predetermined bursting position along said path, holding means for holding said stream of tickets against substantial deflection from said path at said bursting position and bursting blade drive means for bringing said bursting blade into bursting contact with said stream of tickets at said bursting position to burst said leading ticket from said next following ticket. *13*

32. Apparatus according to claim 31, wherein said

separation means includes feed alignment means for controlling said transport means to bring said leading line of weakness to said bursting position.

33. Apparatus according to claim 32, wherein said alignment means includes sensor means for detecting a present position of said leading ticket relative to said bursting position,

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a ^{*determining*}
means for determining a transport direction and a displacement distance necessary to bring said leading line of weakness to said bursting position and transport control means ^{*for*} generating a transport control signal indicative of said transport direction and displacement distance, said transport means being responsive to said transport control signal for transporting said stream of tickets in said transport direction by said displacement distance.

Sub 18 34 Apparatus according to claim 33, wherein said transport control means is responsive to transportation of said stream of tickets by a predetermined incremental distance to generate a transport pulse, said determining means calculates an integral number ^{*60*} substantially equal to said displacement distance divided by said incremental ^{*distance*} distance, and said transport control means permits transport by said transport means during generation of said number of said transport pulses to bring said leading line of weakness to said bursting position.

10 35. Apparatus according to claim ^{*9*} 34, wherein said transport means includes code wheel means for generating said transport pulses.

B ^{*348*}
11 36. Apparatus according to claim ^{*13*} 35, wherein said sensor means detects a leading edge of said leading ticket and said alignment means includes memory means for memorizing a length of said leading ticket.

12 37. Apparatus according to claim ^{*11*} 36, wherein all said tickets have a selected uniform length.

13 38. Apparatus according to claim ^{*10*} 37, further comprising data entry means for entering said uniform length into storage in said memory means.

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14/39. Apparatus according to claim ~~38~~¹³, wherein said determining means calculates said number once in response to entry of said uniform length and stores said number in said memory means, said determining means thereafter supplying said stored number to said transport control means for each ticket.

15/40. Apparatus according to claim ~~39~~⁵, wherein said ticket storage means includes a door which may be opened to selectively place tickets in said ticket storage means and remove tickets therefrom and access detector means for detecting and counting each opening of said door.

41. Apparatus according to claim ~~30~~⁷, wherein said tickets are lottery tickets.

16/42. Apparatus according to claim ~~30~~⁸, further comprising imprinter means for printing vendor identification data on each said ticket.

17/43. Apparatus according to claim ~~42~~¹⁴, wherein said vendor identification data includes a name and address of a vendor associated with said apparatus.

18/44. Apparatus according to claim ~~42~~¹⁵, wherein said imprinter means is located adjacent said path upstream of said bursting position.

19/45. Apparatus according to claim ~~44~~¹⁸, wherein said imprinter means includes a stamper roller bearing an impression of said vendor identification data and an opposed, closely spaced pressure roller adapted to drivingly receive said stream of tickets therebetween, and an ink roller in rolling contact with said stamper roller, motion of said stream of tickets by said transport means causing said stamper, ink and pressure rollers to rotate so as to bring

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said impression into inked contact with each said ticket at a predetermined position thereon.

~~Sub 46~~ A method of preventing unauthorized distribution of valuable items, comprising the steps of:

storing a plurality of lottery tickets in an enclosed storage area within said unit;

accessing the interior of said storage area at selected times to permit deposit and removal of tickets therein;

detecting each access to said interior of said storage area; and

memorizing each said detected access.

47. A method according to claim 46, wherein said valuable items are instant lottery tickets.

~~Sub 47~~ 48. Apparatus for dispensing lottery tickets, comprising:

a box-like module including an interior storage area within which lottery tickets may be stored prior to dispensing;

normally closed door means openable for accessing said interior storage area to permit deposit and removal of tickets therein;

detector means for detecting each opening of said door means;

memory means for memorizing each said detected opening.

49. In a system for distributing lottery tickets from a plurality of remotely located ticket dispensing units assigned to respective vendors, apparatus for identifying said vendors, comprising:

ticket storage means for storing a plurality of

PATENT
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said lottery tickets;

feed means for feeding said lottery tickets from
said ticket storage means to a dispensing position;
and

printer means located adjacent said path at a
position prior to said dispensing position for
printing vendor identification data on each said
ticket.

Add A.127

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ABSTRACT OF THE DISCLOSURE

A system and method for distributing lottery tickets includes a large number of remote, ticket-dispensing units which are connected intermittently, e.g., once each day or week to a central computer. The units record the numbers of tickets sold and transmit the sales data to the central computer, which in turn performs all the necessary accounting functions. Sales reports and invoice data may be sent by the central computer to each unit for printing, which avoids the need to mail the reports/invoices. The tickets are stored in fan-fold form and are burst, rather than cut, apart for dispensing. The tickets are dispensed at one end of the unit which faces the customer. A control panel for the vendor is located at the opposite end. Tickets of different length may be dispensed with an imprint of the vendor's name.

As Original Filed

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364-419

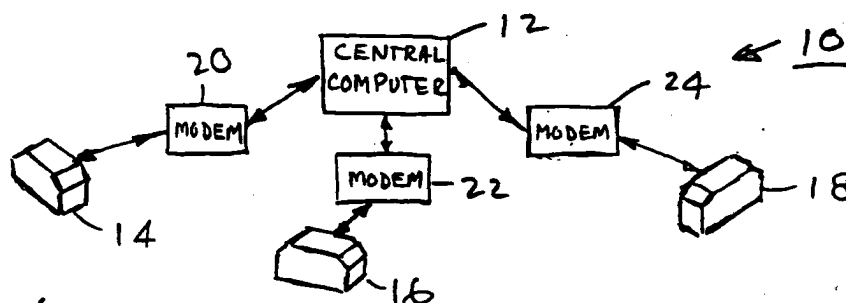


FIG. 1

FIG. 8A

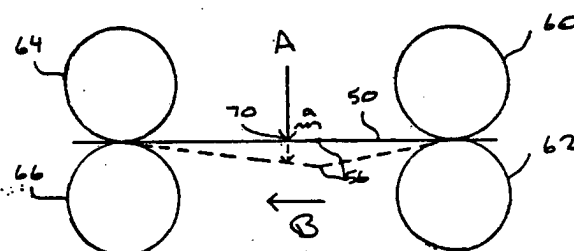
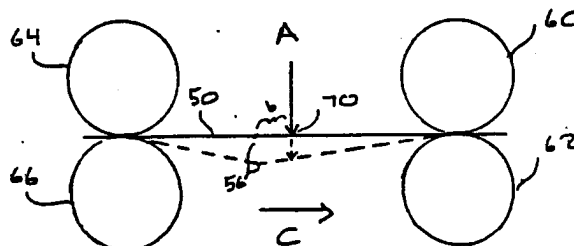


FIG. 8B



As Original Filed

128070

REPORT FORMAT

FIG. 2A

DAILY SALES RPT
FOR 00/00/00

AGENT #	000000
MACH #	00000000
SALES	\$0000.00
PAID	\$000.00
NET	\$0000.00
SE	00

FIG. 2B

WEEKLY SALES RPT
FOR W/E 00/00/00

AGENT #	000000
MACH #	00000000
SALES	
PAID	
NET	
SE	

FIG. 2C

WEEKLY INVOICE
FOR W/E 00/00/00

AGENT #	000000
MACH #	00000000
SALES	\$0000.00
PAY	\$000.00
COMM	\$000.00
NET DUE	\$0000.00

FIG. 2D

CURRENT SALES

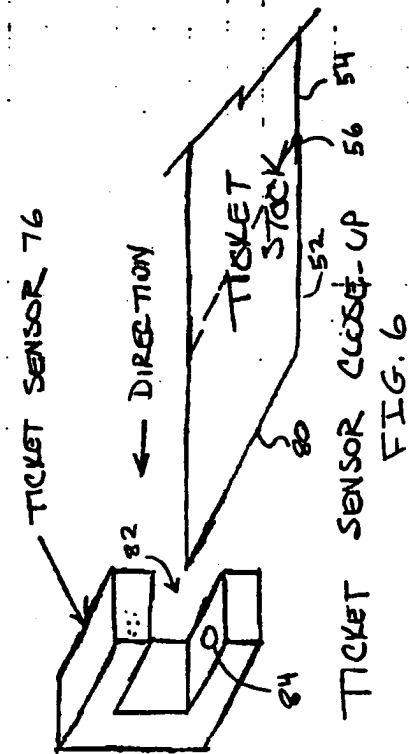
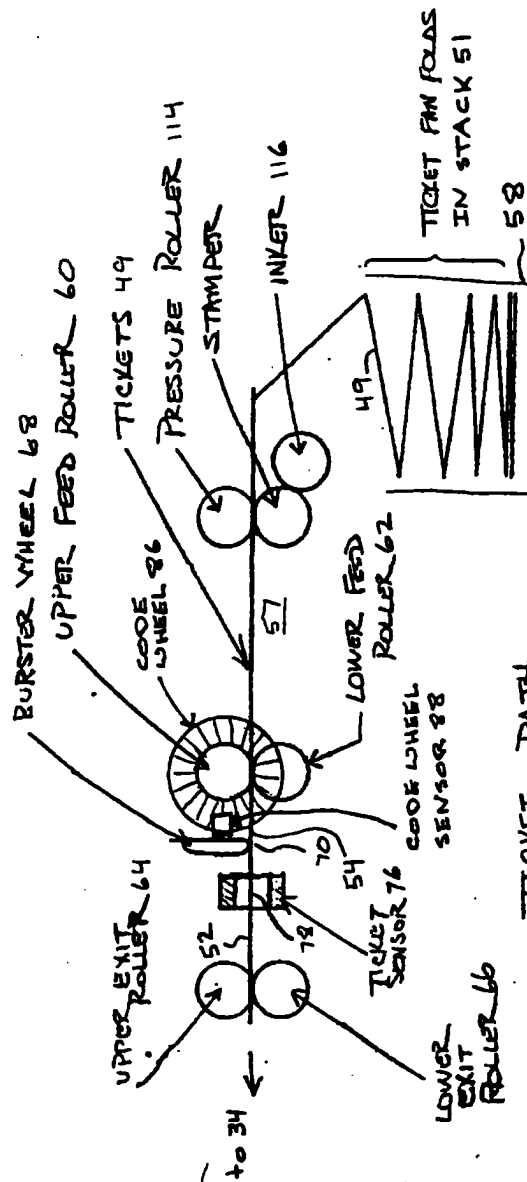
00/00/00	0000:00
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AGENT #	000000
MACH #	00000000
FOR CURRENT DAY	
SALES	\$0000.00
PAID	\$000.00
NET	\$0000.00
SE	00

FOR THIS REPORT

SALES	\$0000.00
PAID	\$000.00
NET	\$0000.00
SE	00

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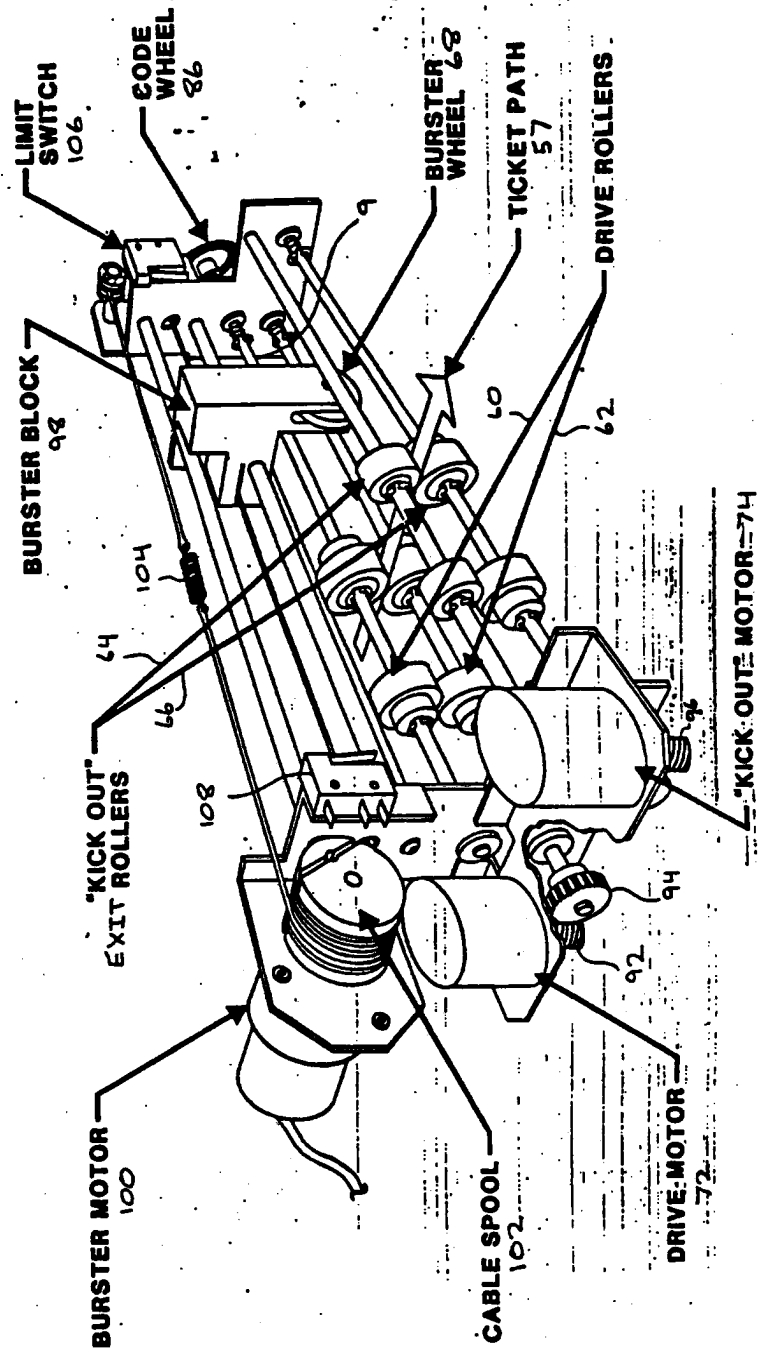


As Original Filed

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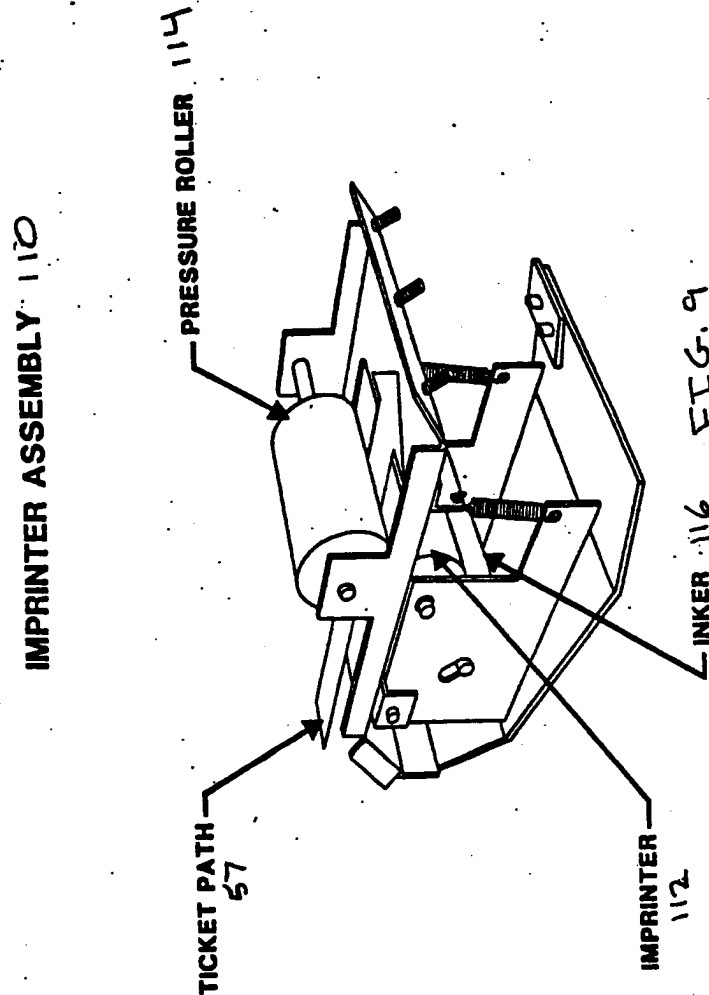
TICKET DRIVE & BURSTER ASSEMBLY

FIG. 7

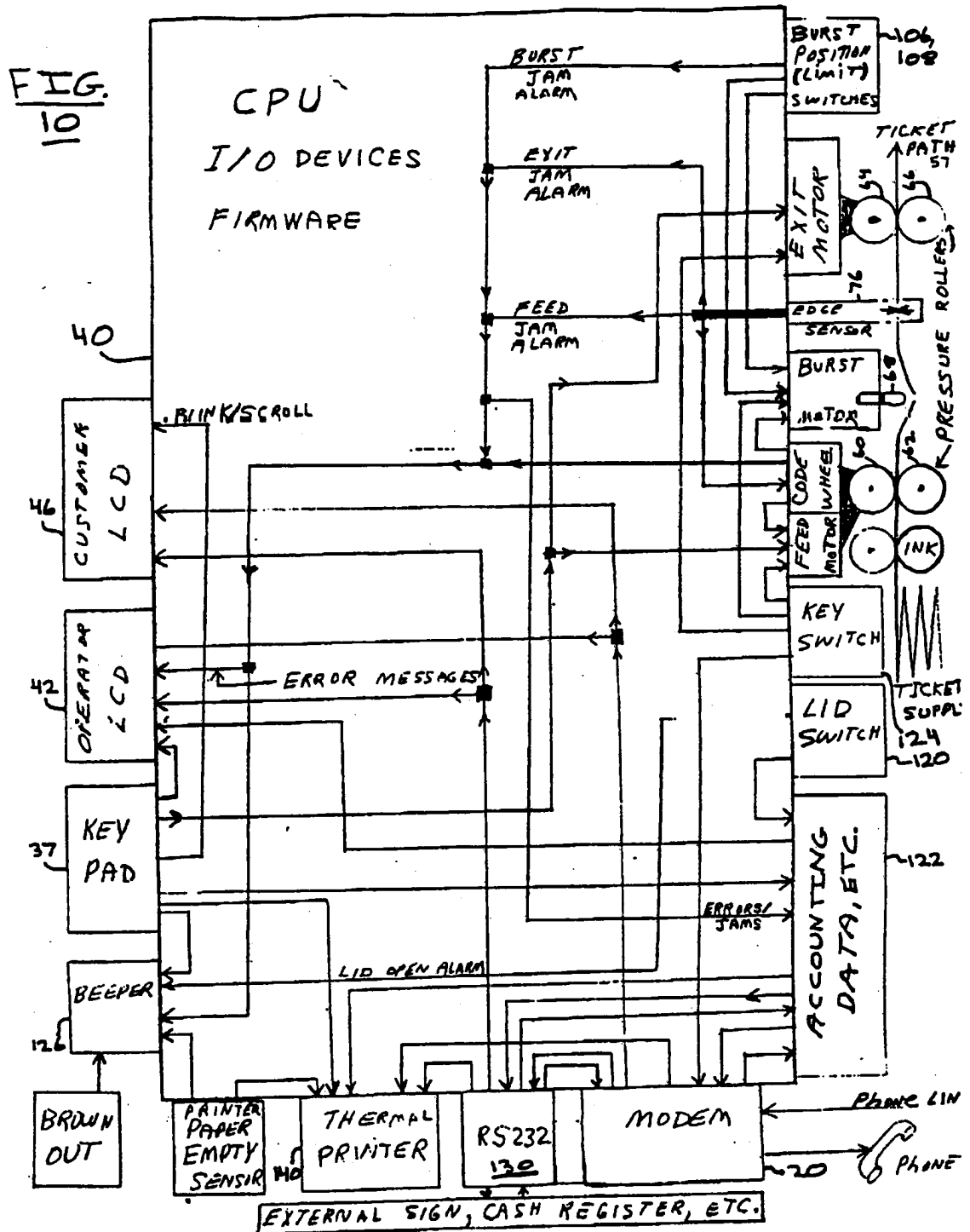


As Original Filed

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Front of Drawing
As Original Filed

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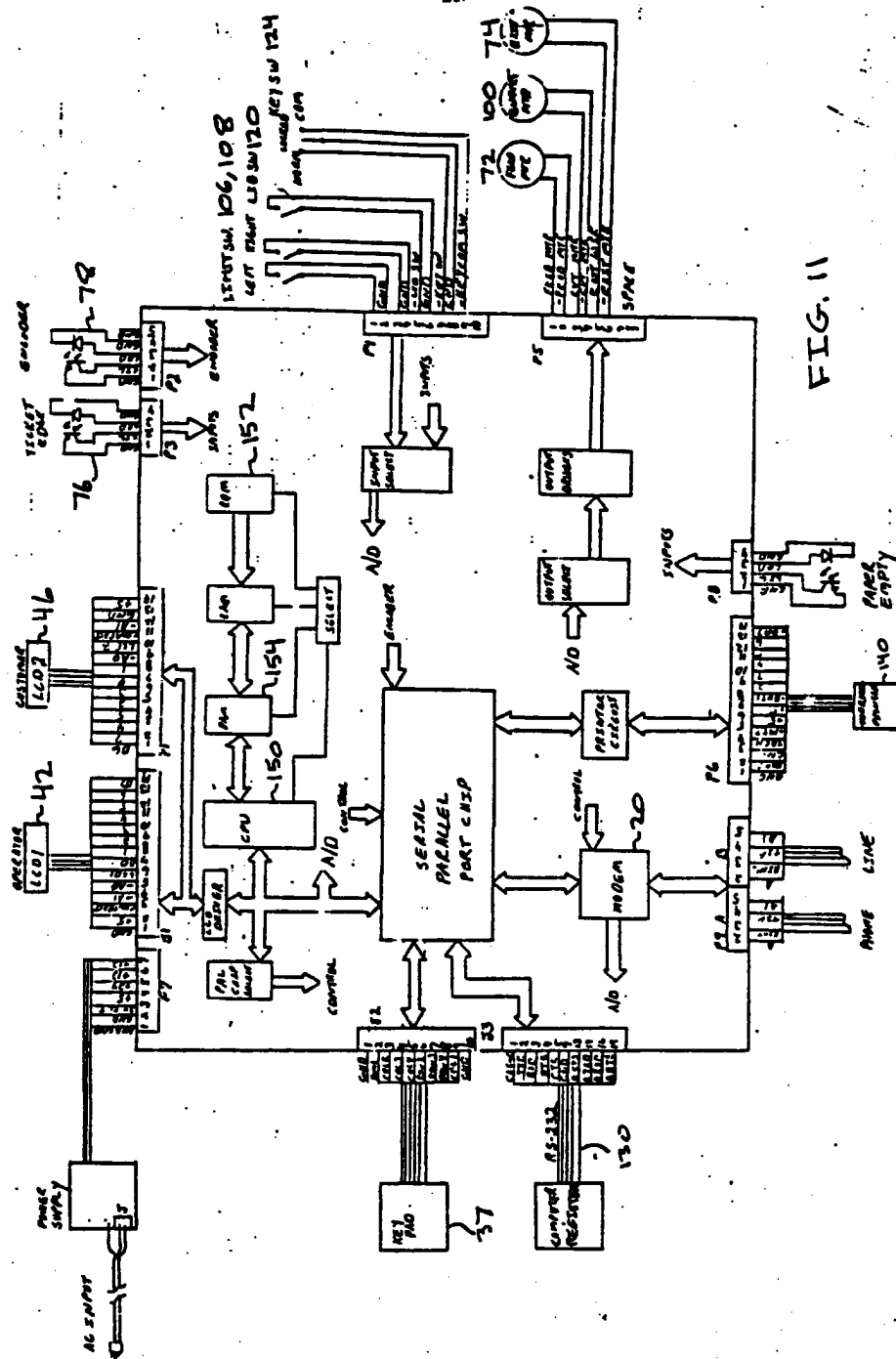


FIG. 11

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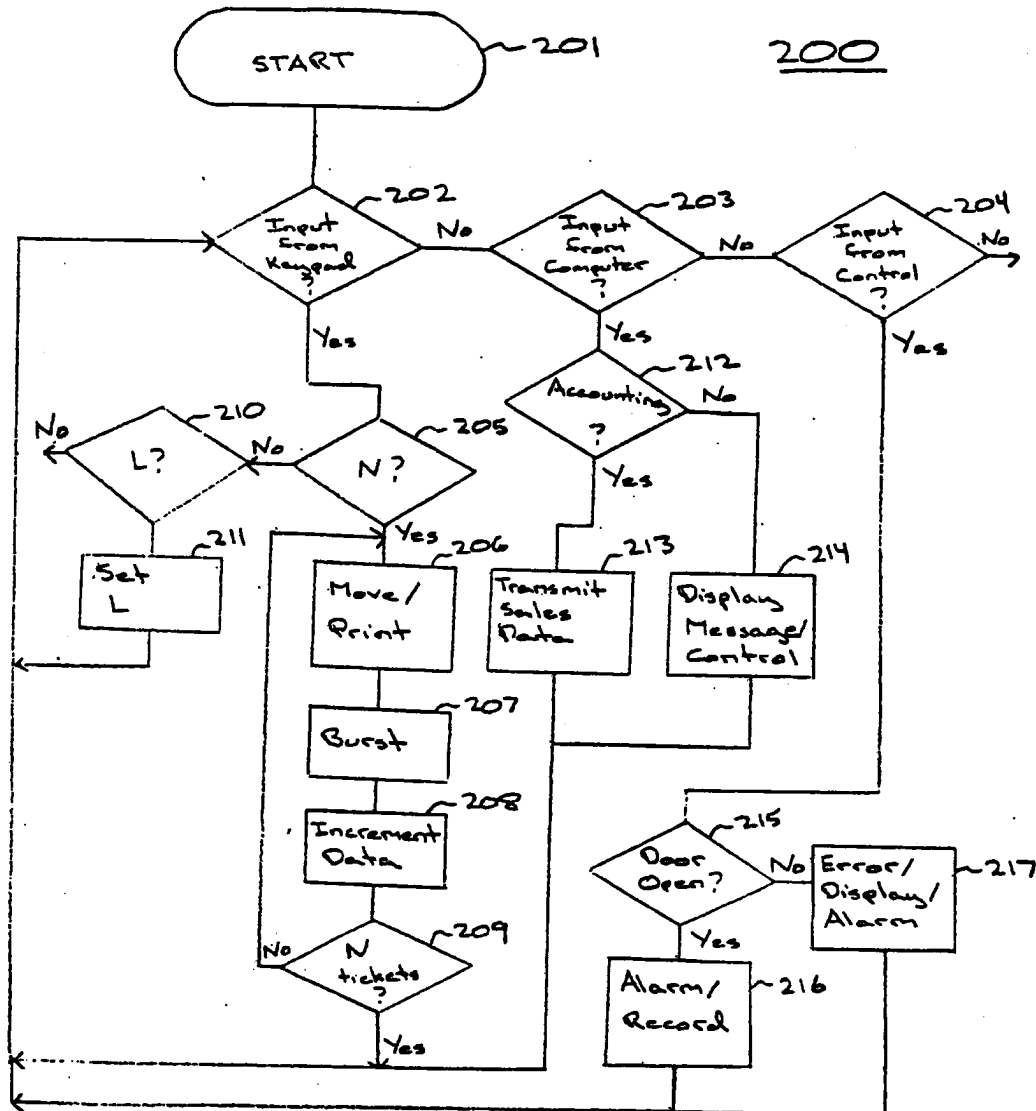


FIG. 12


**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

 Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY DOCKET NO.
07/128,070	12/03/87	BURR	R 332-2130

 CURTIS, MORRIS & SAFFORD
530 FIFTH AVENUE
NEW YORK, NY 10036

000

DATE MAILED: 01/14/88

**NOTICE TO FILE MISSING PARTS OF APPLICATION—
FILING DATE GRANTED**

A filing date has been granted to this application. However, the following parts are missing.

 If all missing parts are filed within the period set below, the total amount owed by applicant as a ☒ large entity, ☐ small entity (verified statement filed), is \$ 110.00

1. ☐ The statutory basic filing fee is: ☐ missing, ☐ insufficient. Applicant as a ☐ large entity, ☐ small entity, must submit \$ _____ to complete the basic filing fee and **MUST ALSO SUBMIT THE SURCHARGE AS INDICATED BELOW.**
2. ☐ Additional claim fees of \$ _____ as a ☐ large entity, ☐ small entity, including any required multiple dependent claim fee, are required. Applicant must submit the additional claim fees or cancel the additional claims for which fees are due. **NO SURCHARGE IS REQUIRED FOR THIS ITEM.**
3. ☒ The oath or declaration: ☒ is missing.
☐ does not cover items omitted at the time of execution.
An oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Serial Number and Filing Date is required. A SURCHARGE MUST ALSO BE SUBMITTED AS INDICATED BELOW.
4. ☐ The oath or declaration does not identify the application to which it applies. An oath or declaration in compliance with 37 CFR 1.63 identifying the application by the above Serial Number and Filing Date is required. A SURCHARGE MUST ALSO BE SUBMITTED AS INDICATED BELOW.
5. ☐ The signature to the oath or declaration is: ☐ missing; ☐ a reproduction; ☐ by a person other than the inventor or a person qualified under 37 CFR 1.42, 1.43, or 1.47. A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Serial Number and Filing Date is required. A SURCHARGE MUST ALSO BE SUBMITTED AS INDICATED BELOW.
6. ☐ The signature of the following joint inventor(s) is missing from the oath or declaration: _____ Applicant(s) should provide, if possible an oath or declaration signed by the omitted inventor(s), identifying this application by the above Serial Number and Filing Date. A SURCHARGE MUST ALSO BE SUBMITTED AS INDICATED BELOW.
7. ☐ The application was filed in a language other than English. Applicant must file a verified English translation of the application and a fee of \$26.00 under 37 CFR 1.17(k), unless this fee has already been paid. **NO SURCHARGE UNDER 37 CFR 1.16(e) IS REQUIRED FOR THIS ITEM.**
8. ☐ A \$20.00 processing fee is required for returned checks. (37 CFR 1.21(m)).
9. ☐ Your filing receipt was mailed in error because check was returned.
10. ☐ Other:

A Serial Number and Filing Date have been assigned to this application. However, to avoid abandonment under 37 CFR 1.53(d), the missing parts and fees identified above in items 1 and 3-6 must be timely provided **ALONG WITH THE PAYMENT OF A SURCHARGE OF \$110.00** for large entities or \$55.00 for small entities who have filed a verified statement claiming such status. The surcharge is set forth in 37 CFR 1.16(e). Applicant is given **ONE MONTH FROM THE DATE OF THIS LETTER, OR TWO MONTHS FROM THE FILING DATE** of this application, **WHICHEVER IS LATER**, within which to file all missing parts and pay any fees. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

Direct the response to, and any questions about, this notice to the undersigned, Attention: Application Branch.

A copy of this notice MUST be returned with response.

 P. Dushoff
For: Manager, Application Branch
(703) 557-3254

 Tech v. Scientific Games
04-128-JJF

For Office Use Only

<input type="checkbox"/> 102	<input type="checkbox"/> 202
<input type="checkbox"/> 103	<input type="checkbox"/> 203
<input type="checkbox"/> 104	<input type="checkbox"/> 204
<input checked="" type="checkbox"/> 105	<input type="checkbox"/> 205

GTECH 000632


**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

 Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
07-123-079	12/03/87	BURG	000-2120

 CURTIS, MORRIS & SATTORI
530 FIFTH AVENUE
NEW YORK, NY 10036

DATE MAILED: 12/11/88

**NOTICE TO FILE MISSING PARTS OF APPLICATION—
FILING DATE GRANTED**

A filing date has been granted to this application. However, the following parts are missing.

 If all missing parts are filed within the period set below, the total amount owed by applicant as a ☒ large entity, ☐ small entity (verified statement filed), is \$ 1110.00

1. ☐ The statutory basic filing fee is: ☐ missing, ☐ insufficient. Applicant as a ☐ large entity, ☐ small entity, must submit \$_____ to complete the basic filing fee and **MUST ALSO SUBMIT THE SURCHARGE AS INDICATED BELOW.**
2. ☐ Additional claim fees of \$_____ as a ☐ large entity, ☐ small entity, including any required multiple dependent claim fee, are required. Applicant must submit the additional claim fees or cancel the additional claims for which fees are due. **NO SURCHARGE IS REQUIRED FOR THIS ITEM.**
3. ☒ The oath or declaration:
☒ is missing.
☐ does not cover items omitted at the time of execution.
 An oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Serial Number and Filing Date is required. **A SURCHARGE MUST ALSO BE SUBMITTED AS INDICATED BELOW.**
4. ☐ The oath or declaration does not identify the application to which it applies. An oath or declaration in compliance with 37 CFR 1.63 identifying the application by the above Serial Number and Filing Date is required. **A SURCHARGE MUST ALSO BE SUBMITTED AS INDICATED BELOW.**
5. ☐ The signature to the oath or declaration is: ☐ missing; ☐ a reproduction; ☐ by a person other than the inventor or a person qualified under 37 CFR 1.42, 1.43, or 1.47. A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Serial Number and Filing Date is required. **A SURCHARGE MUST ALSO BE SUBMITTED AS INDICATED BELOW.**
6. ☐ The signature of the following joint inventor(s) is missing from the oath or declaration:
 Applicant(s) should provide, if possible an oath or declaration signed by the omitted inventor(s), identifying this application by the above Serial Number and Filing Date. **A SURCHARGE MUST ALSO BE SUBMITTED AS INDICATED BELOW.**
7. ☐ The application was filed in a language other than English. Applicant must file a verified English translation of the application and a fee of \$26.00 under 37 CFR 1.17(k), unless this fee has already been paid **NO SURCHARGE UNDER 37 CFR 1.16(e) IS REQUIRED FOR THIS ITEM.**
8. ☐ A \$20.00 processing fee is required for returned checks. (37 CFR 1.21(m)).
9. ☐ Your filing receipt was mailed in error because check was returned.
10. ☐ Other:

A Serial Number and Filing Date have been assigned to this application. However, to avoid abandonment under 37 CFR 1.53(d), the missing parts and fees identified above in items 1 and 3-6 must be timely provided **ALONG WITH THE PAYMENT OF A SURCHARGE OF \$110.00** for large entities or \$55.00 for small entities who have filed a verified statement claiming such status. The surcharge is set forth in 37 CFR 1.16(e). Applicant is given **ONE MONTH FROM THE DATE OF THIS LETTER, OR TWO MONTHS FROM THE FILING DATE** of this application, **WHICHEVER IS LATER**, within which to file all missing parts and pay any fees. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

Direct the response to, and any questions about, this notice to the undersigned, Attention: Application Branch.

GTech v. Scientific Games *A copy of this notice MUST be returned with response.*
04-128-JJF

 For: Manager, Application Branch.
(703) 657-3254

FORM PTO-1533 (REV. 7-87)

COPY TO BE RETURNED WITH RESPONSE

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<input type="checkbox"/> 102	<input type="checkbox"/> 202
<input type="checkbox"/> 103	<input type="checkbox"/> 203
<input type="checkbox"/> 104	<input type="checkbox"/> 204
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GTECH 000633



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Robert L. Burr et al.

Serial No. 07/128,070

Examiner:

Filed December 3, 1987

Group No.

For: SYSTEM AND METHOD FOR
DISTRIBUTING LOTTERY
TICKETS

Date: March 11, 19 88

THE COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

Sir: Transmitted herewith is an amendment in the above-identified application.

☐ No additional fee is required.

The fee has been calculated as shown below.

☐ This is an application of a
small entity under 37 CFR
1.9(f), and the amounts shown
in parentheses apply.

Claims as Amended

(1)	(2) Claims remaining after amendment	(3)	(4) Highest number previously paid for	(5) Present extra	(6) Rate	(7) Additional fee
Total claims	* 49	Minus	**49 =	X	\$12(6)	= 0
Independent claims	* 7	Minus	*** 7 =	X	\$34(17)	= 0
Total additional fee for this amendment						0

* If the entry in Column 2 is less than the entry in Column 4, write "0" in Column 5.
space:** If the Highest number of total claims previously paid for is less than 20, write "20" in this
space.*** If the highest number of independent claims previously paid for is less than 3, write "3" in this
space.☐ This application contains a multiple dependent claim. The required fee of
\$110(55) has been previously paid ☐ or is paid herewith ☐☒ This response is being filed within the ☒ first month, ☐ second month,
☐ third month, ☐ fourth month following the expiration of the term originally set
therefor, and the fee of ☒ \$56(28) , ☐ \$170(85) , ☐ \$390(195) , ☐ \$610(305) for the
requisite extension is due and ☐ paid herewith.☒ A check in the amount of \$.....320.00..... is attached.☐ Charge \$ to Deposit Account No. 03-3925.☒ Please charge any additional fees incurred by reason of this response or credit
any overpayment to Deposit Account No. 03-3925. A duplicate copy of this
sheet is enclosed.CURTIS, MORRIS & SAFFORD, P.C.
Attorneys for Applicant(s)By Abigail F. Cousins
Abigail F. Cousins

Registration No. 29,292

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Tel. 212-840-3333 115

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Deputy
ASST
Com
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: ROBERT L. BURR et al.

Serial No.: 07/128,070

Filed : December 3, 1987

For : SYSTEM AND METHOD FOR
DISTRIBUTING LOTTERY
TICKETS

I hereby certify that this correspondence is being
deposited with the United States Postal Service
as first class mail in an envelope addressed to:
Commissioner of Patents and Trademarks,
Washington, D.C. 20231, on March 11, 1988

Abigail F. Cousins, Reg. No. 29,292

Name of Applicant, Assignee or Registered
Representative

Abigail F. Cousins
Signature

March 11, 1988

Date of Signature

RECEIVED

APR 1 1988

APPLICATION BRANCH

PETITION TO THE COMMISSIONER UNDER 37 CFR
SECTION 1.48(a) FOR CORRECTION OF INVENTORSHIP
TO ADD ADDITIONAL JOINT INVENTOR AND FOR
EXTENSION OF TIME FOR RESPONSE TO NOTICE TO
FILE MISSING PARTS OF APPLICATION

Hon. Commissioner of Patents and Trademarks
Washington, D.C. 20231

Sir:

The above-identified application was filed on
December 3, 1987 without a Declaration and naming three
joint inventors on the title page of the specification,
specifically Robert L. Burr, Laird A. Campbell and Donald
Keagle. On January 14, 1988, a Notice to File Missing Parts
of Application-Filing Date Granted was mailed, requiring
that an Oath or Declaration in compliance with 37 CFR
Section 1.63 be filed. It has now been discovered that the
correct inventive entity was not named in the
above-identified application as originally filed, and that
in fact an additional fourth joint inventor, Alfred L.
Fulton, was omitted without any deceptive intention on the
part of the actual inventors and should now be named. This
Petition is being filed both to amend diligently the

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above-identified application to name the actual inventors and to satisfy the requirements stated in the Notice.

This Petition is accompanied by the necessary supporting papers. Since the first named joint inventor, Robert L. Burr, is located in California and the second, third and omitted fourth joint inventors, Laird A. Campbell, Donald H. Keagle and Alfred L. Fulton, are located in Alabama, duplicate documents have been executed where necessary. Therefore, this Petition is accompanied by an Amendment to Correct Inventorship, two copies of a first Verified Statement of Facts executed respectively by Robert L. Burr and by Laird A. Campbell and Donald H. Keagle, the original three named inventors, and a second Verified Statement of Facts executed by the omitted fourth inventor Alfred L. Fulton, each Verified Statement of Facts establishing when the error without deceptive intent was discovered and how it occurred. Also submitted herewith are two Declarations naming all four actual inventors as required by Section 1.63, the first Declaration having been executed by Robert L. Burr and the second Declaration having been executed by Laird A. Campbell, Donald H. Keagle and Alfred L. Fulton, two Assignments from different ones of the joint inventors to two different assignees, and the written consents of the two assignees. This Petition is being filed in the first month following the expiration of the term for filing the Declaration. The Commissioner is further petitioned for a one-month extension of time. Enclosed herewith is a check in the amount of \$320.00, including the fee under Section 1.17(h) of \$140.00 for filing a Petition under Section 1.48 for Correction of Inventorship, the Surcharge of \$110.00 under Section 1.16(e) for late filing

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of the two Declarations as required by the Notice, the fee of \$14.00 under Section 1.21(h)(1) for recording the two Assignments, and the fee of \$56.00 under Section 1.17(a) for a one-month extension of time.

As stated in the accompanying Verified Statements of Facts, the invention disclosed and claimed in this application was invented jointly by Robert L. Burr, Laird A. Campbell, Donald H. Keagle and Alfred L. Fulton.

This invention was originally conceived in part by Robert L. Burr and was further conceived and developed by Laird A. Campbell, Donald H. Keagle and Alfred L. Fulton, employees of the second assignee SCI Technology, Inc., for a product to be commercially sold by SCI Technology, Inc. In such a concentrated effort to develop a product, such as the product within which the invention disclosed and claimed in the above-identified application is incorporated, it is not unusual that the memories of the individuals involved often are not able to recall precisely whether a particular invention or aspect thereof was conceived and reduced to practice by a particular individual or individuals. In particular, even though employees of the same company may be working together on a project, each employee may not necessarily comprehend the nature or extent of the contributions of all other employees working on the project.

Nevertheless, at the time the present application was being prepared and filed, in the second half of November and early December of 1987, it was earnestly believed that the proper inventorship for the invention disclosed in the claim therein had been determined accurately. Thus, at the time of filing the above-identified application, Robert L. Burr firmly believed that the invention described and

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claimed therein had been developed jointly by him and certain employees of SCI, Inc., and relied on the identification of joint inventorship supplied by SCI Technology, Inc., and Laird A. Campbell and Donald H. Keagle each firmly believed that the invention described and claimed therein had been developed jointly by them together with Robert L. Burr. Furthermore, Alfred L. Fulton was not aware, at the time of the filing of the above-identified application, of his entitlement to be named as joint inventor on the above-identified application.

However, after further consideration at SCI Technology, Inc., including discussions held between Alfred L. Fulton, Laird A. Campbell and Donald H. Keagle, and upon consultation with patent attorneys for SCI Technology, Inc., it was discovered that, in fact, the invention disclosed and claimed in this application was developed jointly by Robert L. Burr, Laird A. Campbell and Donald H. Keagle together with Alfred L. Fulton, and not jointly by just the first three. It was then recognized that Alfred L. Fulton had been erroneously omitted from the title page of this application because of inadvertence, confusion and mistake at the time of the preparation and filing of the above-identified application. Once these facts were discovered, the patent attorneys for SCI who prepared and filed this application were immediately advised to correct the inventorship of this application, and they promptly prepared this Petition and the accompanying Amendment, together with supporting documents, to correct the inadvertent error whereby Alfred L. Fulton was omitted as a joint inventor of this application.

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In view of the foregoing and the accompanying Verified Statements of Facts, it is believed that this Petition has been prepared diligently to correct an inadvertent error made without deceptive intention on the part of the actual inventors. Therefore, the Commissioner is respectfully petitioned to permit the amendment of this application to include Alfred L. Fulton as a joint inventor.

Please charge any additional fees required by the filing of this Petition or credit any overpayment to Deposit Account No. 03-3925. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

CURTIS, MORRIS & SAFFORD, P.C.
Attorneys for Applicants

By: Abigail F. Cousins
Abigail F. Cousins
Reg. No. 29,292

AFC:AC7:14

CURTIS, MORRIS & SAFFORD, P.C.
530 Fifth Avenue
New York, New York 10036
(212) 840-3333
February 3, 1988



332-2130
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: ROBERT L. BURR et al.

Serial No.: 07/128,070

Filed : December 3, 1987

For : SYSTEM AND METHOD FOR
DISTRIBUTING LOTTERY
TICKETS

I hereby certify that this correspondence is being
deposited with the United States Postal Service
as first class mail in an envelope addressed to:
Commissioner of Patents and Trademarks,
Washington, D.C. 20231, on March 11, 1988

Abigail F. Cousins, Reg. No. 29,292

Name of Applicant, Assignee or Registered
Representative

Abigail F. Cousins
Signature

March 11, 1988

Date of Signature

AMENDMENT TO CORRECT INVENTORSHIP

Hon. Commissioner of Patents and Trademarks
Washington, D.C. 20231

Sir:

Please amend the above-identified application by
adding Alfred L. Fulton as an inventor of the subject matter
disclosed and claimed in said application.

Remarks

This Amendment is being filed because the
above-identified application was made through error and
without any deceptive intention by less than all the actual
joint inventors. Applicants are filing concurrently
herewith a Petition to the Commissioner under 35 C.F.R.
Section 1.48(a) for Correction of Inventorship to Add
Additional Joint Inventor. As stated therein and as stated
in the accompanying Verified Statements of Facts, the
invention disclosed and claimed in this application was
invented jointly by Robert L. Burr, Laird A. Campbell,
Donald H. Keagle and Alfred L. Fulton. The Examiner is

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respectfully referred to the Petition and the Verified Statements of Facts for a description of how Alfred L. Fulton was omitted through error without any deceptive intention on the part of the actual inventors.

In addition, applicants respectfully note that on January 14, 1988, a Notice to File Missing Parts of Application-Filing Date Granted was mailed, confirming that Serial No. 128,070 and the filing date of December 3, 1987 were granted to this application, and requiring an Oath or Declaration in compliance with 37 CFR Section 1.63, identifying the application by the above Serial No. and filing date, together with a surcharge of \$110.00, be filed within one month from the date of such Notice.

In compliance with this requirement, applicants herewith submit two executed Declarations, identifying the above-identified application by Serial No. and filing date. Both Declarations identify all four actual inventors, with the first named inventor having executed the first Declaration and the second, third and fourth actual inventor having executed the second Declaration. Submitted herewith is a copy of the Notice to File Missing Parts of Application-Filing Date Granted, together with a check for \$320.00 which includes the surcharge of \$110.00, as explained in the Petition. The Petition further petitions the Commissioner for a one-month extension of time for response to the Notice to File Missing Parts of Application.

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Please charge any additional fees required by the
filing of this Amendment or credit any overpayment to
Deposit Account No. 03-3925. A duplicate copy of this sheet
is enclosed.

Respectfully submitted,
CURTIS, MORRIS & SAFFORD, P.C.
Attorneys for Applicants

by: Abigail F. Cousins
Abigail F. Cousins
Reg. No. 29,292

CURTIS, MORRIS & SAFFORD, P.C.
530 Fifth Avenue
New York, New York 10036
(212) 840-3333
February 3, 1988

AFC:AC7:17



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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: ROBERT L. BURR et al.

Serial No.: 07/128,070

Filed : December 3, 1987

For : SYSTEM AND METHOD FOR
DISTRIBUTING LOTTERY
TICKETS

I hereby certify that this correspondence is being
deposited with the United States Postal Service
as first class mail in an envelope addressed to:
Commissioner of Patents and Trademarks,
Washington, D.C. 20231, on March 11, 1988

Abigail F. Cousins, Reg. No. 29,292

Name of Applicant, Assignor or Registered
Representative

Abigail F. Cousins
Signature

March 11, 1988

Date of Signature

VERIFIED STATEMENT OF FACTS BY ORIGINALLY NAMED
JOINT INVENTORS

Hon. Commissioner of Patents & Trademarks
Washington, D.C. 20231

Sir:

We, Robert L. Burr, Laird A. Campbell and Donald
H. Keagle state that:

1. Robert L. Burr, Laird A. Campbell and Donald
H. Keagle are the inventors named on the title page of the
above-identified Application Serial No. 07/128,070, filed
December 3, 1987 without a Declaration for SYSTEM AND METHOD
FOR DISTRIBUTING LOTTERY TICKETS.

2. The invention defined in the claims of said
application was invented jointly by Robert L. Burr, Laird A.
Campbell, Donald H. Keagle and Alfred L. Fulton.

3. The invention defined in the claims of said
application was developed for and now is included in a
product commercially sold by SCI Technology, Inc., an
assignee of said application. This product incorporates
various aspects of the present invention for which said
patent application was prepared and filed.

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4. The invention described and claimed in said Application Serial No. 07/128,070 was originally conceived in part by Robert L. Burr and was further conceived and developed at SCI Technology, Inc. by Laird A. Campbell, Donald H. Keagle and Alfred L. Fulton.

5. At the time of the preparation of said Application Serial No. 07/128,070, during the latter half of November and the beginning of December, 1987 and at the time of its filing on December 3, 1987, Robert L. Burr firmly believed that the invention defined by the claims of this application had been invented jointly by him with certain employees of SCI, Technology, Inc., and relied on the identification of joint inventorship supplied to him by SCI Technology, Inc. Further, at the time of the preparation and filing of said application, Laird A. Campbell and Donald H. Keagle each firmly believed that the invention defined by the claims of said application were developed jointly by them with Robert L. Burr, and did not appreciate that Alfred L. Fulton was entitled to be named as a joint inventor. In view of this belief, the application was filed with a title page naming Robert L. Burr, Laird A. Campbell and Donald (H.) Keagle as the joint inventors of the invention described and claimed therein.

6. Subsequent to the filing of the application on December 3, 1987 without a Declaration, in late December, 1987 and January, 1988, we discovered that, in fact, the invention defined by the claims of said application was developed jointly by Robert L. Burr, Laird A. Campbell, Donald H. Keagle and Alfred L. Fulton, also an employee of SCI Technology, Inc. The conclusion that an inadvertent error had occurred was reached by January 20, 1988.

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7. Robert L. Burr, Laird A. Campbell and Donald H. Keagle permitted the filing of said application with a title page naming only themselves as joint inventors without any deceptive intent.

8. It is our firm belief, in view of the fact that the invention described and claimed in said application was developed in conjunction with an overall product embodying the same and that various features and aspects of the present invention are combined in said product and the the product was developed by and as a result of contributions from several individuals, that the preparation and filing of said application without naming Alfred L. Fulton as a joint inventor was because of inadvertence, confusion and mistake.

9. Upon the discovery of the facts supporting the naming of Alfred L. Fulton as a fourth joint inventor, these facts were promptly and with diligence communicated to Abigail F. Cousins and Curtis, Morris & Safford, P.C., requesting that they take the necessary action to correct such error and to amend said application to include Alfred L. Fulton with Robert L. Burr, Laird A. Campbell and Donald H. Keagle as joint inventors of the invention described and claimed in said application.

The undersigned further declare that all statements made herein of their own knowledge are true and that all statements on information or belief are believed to be true; and further that these statements are made with the

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knowledge that willful and false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.



ROBERT L. BURR

Date: 2/18/88

LAIRD A. CAMPBELL

Date: _____

DONALD H. KEAGLE

Date: _____

AC:AC7:15